

Artificial Intelligence Literacy Lessons Teacher's Guide

September 2025



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Artificial Intelligence Literacy Lessons Teacher's Guide

INTRODUCTION

Artificial Intelligence (AI) functionalities are everywhere now, and it is important that our educators and students have basic understandings of how to use AI tools safely, ethically and responsibly.

To help with this, Focused Education's PLT and a team of BC teachers have created a series of 21 lessons and associated activities designed to give teachers and students that baseline knowledge.

There are 21 lessons: 7 for Primary (K to 3), 7 for Intermediate (4 to 7) and 7 for Secondary (8 to 12).

The lessons focus on the following topics:

Basic Understanding of What Artificial Intelligence Is and How It Works	
Plagiarism/Academic Integrity	Deep Fakes, Misinformation
Safe, responsible use of Al	Environmental Impact
Prompting	Life Balance
Bias and Hallucination	Creativity and AI
Ethics	Future readiness

Overview of Teacher's Guide

This guide provides ease of access to **the PowerPoint (.pptx) and video versions** of each lesson, as well as activity links.

Teachers can scan the lesson summary in this guide, to guickly understand the purpose of each lesson.

Key **speaking points** are included in each lesson, based on the notes **from the PowerPoint (.pptx)** versions.

Lesson Design

Each lesson has been developed for teacher's instructional use with students and lessons are meant to be taught in sequence.

The intent is that one lesson would be taught each month of the school year, omitting December, March and June.



Lesson Format

- 1. PowerPoint (.pptx) slides with speaker notes
 - o This option might work well for teachers who are reasonably comfortable with Al
- 2. Videos of each slide deck.
 - This option might work well for teachers who feel less sure about Al. These may be shown with or without closed captioning.
 - NOTE: There are class discussions built into each lesson, so teachers using this format should watch the video beforehand and note when to stop and start the video for discussions.
- 3. Each lesson includes extension activities.

Lesson Delivery

- 1. Preview all materials to familiarize yourself with concepts and vocabulary that might need preteaching.
- 2. Some lessons may extend over more than one instructional period to fully explore a topic or concept.



PRIMARY ARTIFICIAL INTELLIGENCE LESSONS

Lesson One - Natural or Artificial

Access instructional PowerPoint (.pptx) - <u>Al Primary Lesson1.PowerPoint (.pptx)</u>
Access instructional video - <u>Al Primary Lesson 1 Natural & Artificial</u>

Lesson Overview:

This lesson focuses on guiding students to differentiate between examples of 'natural', as in the physical world and 'artificial', as in human-made.

Be prepared to record student responses where they can see them, i.e. whiteboard, chart paper.

Extension Activity:

Have students bring a picture or a drawing from home of something that was made by humans OR something that grows in nature.

Collect these on a poster or white board.

Allow students to help decide in which category to place each item.

Lesson Two - How We Learn

Access instructional PowerPoint (.pptx) - <u>Al Primary Lesson 2.PowerPoint (.pptx)</u>
Access instructional video - <u>Al Primary Lesson 2 How we Learn</u>

Lesson Overview:

This lesson focuses on guiding students to understand how their brain and senses help them learn and to experience the world. The concept of 'sense' is also used to describe how machines and robots can perform an action. Several examples are provided to compare human and machine use of sense.

Extension Activity:

This lesson has two extension activities related to sensors on robots.

- Be the Robot this game can be played outside or in the gym.
- Followup activity Provide students with an instructional template for creating their robot.

Lesson Three - Artificial Intelligence

Access instructional PowerPoint (.pptx) – <u>Al Primary Lesson 3.PowerPoint (.pptx)</u> Access instructional video - Al Primary Lesson 3 Artificial Intelligence

Lesson Overview:

This lesson describes how AI systems are being trained, through data, to process information, make decisions, and adapt to situations much like human brains.

Concepts like 'natural language processing', and 'algorithms' are explained in a kid-friendly way in the video, however these might be terms to explore further with students.

Video - What is AI? https://youtu.be/kQPC4 DsJ8I



Extension Activity:

This is a lesson plan on sorting and classifying objects to reinforce understanding of 'data'.

Lesson Four – Creating Prompts

Access instructional PowerPoint (.pptx) - <u>Al Primary Lesson 4.PowerPoint (.pptx)</u>
Access instructional video - Al Primary Lesson 4 Creating Prompts

Lesson Overview:

Students will learn how to create an effective prompt through providing clear details and instructions.

Extension Activity:

There are two activities that can be done with this lesson.

- Play **Partner Robots.** This can be done with students of any age. <u>Here are the instructions.</u> These instructions were written as part of teaching students to code. Try to change your wording from "coding the robot" to "prompting the robot".
- Write an AI prompt to create their own imaginary animal. Provide students with this prompt frame to complete independently, in pairs or small groups:

Create a picture of a <u>size animal</u> that lives in <u>a location</u>. It has <u>something</u> on its body, something else on its head, colour eyes, something and something.

Here is the first example from the slide deck.

Create a picture of a <u>small monster</u> that lives <u>in the snowy woods</u>. It has <u>blue scales</u> on its body, <u>two horns</u> on its head, <u>blue</u> eyes, <u>sharp teeth</u> and <u>wings</u>.

Ask students how they would fill out the prompt for the next slide in the deck.

As a teacher, you can use the image generator in any Al image generator you have access to, i.e. <u>Twin</u> <u>Pics</u>. Enter the student prompts and display the result to students. Note that many free image generators will only let you run a few generations a day, so you might have to spread this out over a week's time.

Lesson Five - Staying Safe

Access instructional PowerPoint (.pptx) - <u>Al Primary Lesson 5.pptx</u>
Access instructional video - <u>Al Primary Lesson 5 Staying Safe</u>

Lesson Overview:

This lesson emphasizes safe practices in using technology, identifying and protecting personal information, and responsible use of AI tools for learning. This includes checking with an adult or teacher on usage and taking responsibility for student's own learning and work.

Video: Meet the Digital Citizens (Guts) https://youtu.be/rzNUo7Q g-k



Extension Activity:

These rules are really important. As an extension, have students brainstorm to see if there are any other things they can do to stay safe while using Al. Have students choose one example and create a poster to help other students learn the message.

Lesson Six - Keeping a Balance

Access instructional PowerPoint (.pptx) - <u>Al Primary Lesson 6.pptx</u> Access instruction video - <u>Al Primary Lesson 6 Keeping a Balance</u>

Lesson Overview:

This lesson promotes the importance of spending time on activities other than technology devices and developing the concept of balance.

Video: Meet the Digital Citizens (Arms) https://youtu.be/3-MW8EJrPWQ

This video is part of an excellent set of videos from Common Sense Media, aimed at helping younger students develop good digital citizenship skills. You can find them here: https://www.commonsense.org/education/collections/intro-to-digital-citizenship-lessons-for-grades-k-2

Extension Activity:

Share the "Media Balance Is Important" activity sheet with students, <u>linked here</u>. This comes from Common Sense Media.

Lesson Seven – Real or Fake?

Access instructional PowerPoint (.pptx) - Al Primary Lesson 7.pptx Access instructional video - Al Primary Lesson 7 Real or Fake

Lesson Overview:

Students will be guided to think critically when looking at images to determine whether AI has been used to alter or create an image. Note: the technology is changing so quickly, this is becoming more of a challenge.

Extension Activity:

A follow-up or extension lesson would be <u>Common Sense Media's Seeing is Believing</u> lesson. Teachers will need to create a free educator account to access the lesson.



INTERMEDIATE ARTIFICIAL INTELLIGENCE LESSONS

Lesson One – What is Artificial Intelligence?

Access instructional PowerPoint (.pptx) - <u>Al Intermediate Lesson 1.pptx</u>
Access instructional video - <u>Al Intermediate Lesson 1 What is Artificial Intelligence</u>

Lesson Overview:

This lesson provides a detailed definition of AI definition including terms like 'generative AI', 'Large Language Models', and 'algorithms'. It describes how AI is trained through data inputs and provides examples of AI interactions that might be familiar to students.

Video: What is AI? https://youtu.be/b0KaGBOU4Ys

Extension Activity:

Allow students to play with Google's Quick Draw: https://quickdraw.withgoogle.com/

Lesson Two – Safe and Responsible Use of Artificial Intelligence

Access instructional PowerPoint (.pptx) - <u>Al Intermediate Lesson 2.pptx</u>
Access instruction video - Al Int Lesson 2 Save and Responsible Use of Al

Lesson Overview:

This lesson emphasizes safe practices in identifying and protecting personal information, and understanding the privacy implications related to AI use.

Concepts in this lesson include AI hallucinations, academic integrity, and citing sources. Students will be reminded to follow school and classroom guidelines for the use of AI.

Video: Private and Personal Information https://www.youtube.com/watch?v=MjPpG2e71Ec

Extension Activity:

To help students understand the concept of personal information and its importance, have them play Data Defenders https://mediasmarts.ca/sites/mediasmarts/files/games/data-defenders/

Lesson Three – Bias & Prompting

Access instructional PowerPoint (.pptx) – Al Intermediate Lesson 3.pptx

Access instructional video - Al Intermediate Lesson 3 Bias and Prompting

Lesson Overview:

This lesson has two distinct sections and may be split into two teaching sessions.

The first section covers the concepts of training and testing data. It illustrates how data inputs can create bias in the responses that AI generates, and the social implications that can occur due to bias.

Video: Al Training and Bias https://youtu.be/x2mRoFNm22g



The second section is on using the **RACE** strategy for crafting effective Al prompts.

Role

Action

Context

Expected Outcome

Extension Activity:

To practice the act of prompting, use Twin Pics or a locally approved application.

Lesson Four – What is Ethics?

Access instructional PowerPoint (.pptx) – <u>Al Intermediate Lesson 4.pptx</u> Access instructional video - Al Intermediate Lesson 4 What is Ethics

Lesson Overview:

This lesson has **dense information** and covers several key concepts including ethics and its relevance to the use of technology, deepfakes, and misinformation.

Consider extending this lesson over several sessions.

Ethics Section

Talking points for teachers – refer to these <u>Al-related information points</u> to support discussion with students.

Video: Ethics & AI: Equal Access and Algorithmic Bias https://www.youtube.com/watch?v=tJQSyzBUAew

Followup Activity for Students: Ethics Student Activity Outline

Deepfake Section

Talking points for teachers:

Deepfakes are a type of media that has been changed using AI to look or sound real, even though it's not. This could be a video of someone saying something they never actually said, or a photo that's completely fake but looks real.

The problem with deepfakes is that they can be used to spread false information and trick people. For example, someone might believe a fake video is real news. (A recent example was fake photos during BC's wildfire season)

Deepfakes can also damage a person's reputation if they show them doing or saying something inappropriate or untrue.

As deepfakes get more realistic, it becomes harder to tell what's real and what's fake online. That's why it's important to think critically, check sources, and ask questions about what we see and hear on the internet.

Video: What is a Deepfake and how do they work? https://www.youtube.com/watch?v=W631WArdFOs



Misinformation/Disinformation Section

Talking points for teachers:

Misinformation and disinformation are both types of false or misleading information, but they differ in their intent. Misinformation is false information shared by someone who doesn't realize it's incorrect, while disinformation is deliberately created to mislead and cause harm.

Misinformation Definition: False or inaccurate information that is spread without the intention to deceive or cause harm.

Example: Sharing an old photo online with a false caption, believing it to be current. Reason: Often due to a lack of critical thinking, misunderstanding, or a simple mistake.

Disinformation Definition: False information that is deliberately created and spread to mislead, manipulate, or cause harm.

Example: Creating a fake news article to influence public opinion or damage someone's reputation.

Reason: Often used for political gain, financial profit, or to spread propaganda.

Video What is misinformation? Let's break it down. https://www.youtube.com/watch?v=wyUrV8BELG4

Talking points for teachers:

What is misinformation?

Misinformation is when people share information that isn't true, but they don't realize it's false.
 Maybe they saw it online and thought it was real, so they passed it along without checking first.

What's the difference between misinformation and disinformation?

- There's also something called disinformation. That's when someone shares false information on purpose, to trick people or cause harm.
- Misinformation is usually an accident. Disinformation is done on purpose.

Why is this a problem?

When misinformation spreads, it can cause a lot of confusion. People might believe something
that isn't true, and that can lead to fear, arguments, or even hurt someone's reputation. That's
why it's so important to think before we share something.

How can we tell what's true and what's not?

- Ask yourself: Where did this come from?
- Check if it's from a trusted source, like a news site, a teacher, or a book.
- Talk to a trusted adult if something doesn't seem right.

Reflection:

One of the best ways to stay safe and smart online is to slow down and check things before we believe or share them. If something sounds strange or too good to be true, it's okay to question it. That's how we become responsible digital citizens.



Extension Activity:

Play the Reality River game from Google's Be Internet Awesome site.

Lesson Five - Impacts of Artificial Intelligence

Access instructional PowerPoint (.pptx) - Al Intermediate Lesson 5.pptx Access instructional video - Al Intermediate Lesson 5 Impacts of Al

Lesson Overview:

This lesson poses questions about Al's impact on society from a resource perspective and a life balance perspective.

It provides an overview of the resources that are required to generate Al. These include energy use, non-renewable resources (i.e. rare minerals), and clean water.

Students are asked to consider their own use of technologies and AI, and to explore ways to lower that energy consumption level.

Video: AI & Sustainability https://www.youtube.com/watch?v=C9nuTfm18KY

The second part of the lesson focuses on creating a balance between screen time and green time; bringing other activities into students' lives.

Video: My Media Balance https://www.youtube.com/watch?v=USIHaqNfwK4

Extension Activity:

Have students further consider their media balance by completing this activity from Common Sense Media: https://tinyurl.com/3r5hh7f5

Lesson Six - Creativity & Artificial Intelligence

Access instructional PowerPoint (.pptx) - <u>Al Intermediate Lesson 6.pptx</u>
Access instructional video - <u>Al Intermediate Lesson 6 Creativity and Al</u>

Lesson Overview:

This lesson discusses a definition of creativity. It considers whether machines and AI can be creative, and guides students through an activity to compare human and AI created images. emphasizes safe practices in identifying and protecting personal information, and understanding the privacy implications related to AI use.

There is opportunity for class discussion, small group or independent work.

Extension Activity:

Give students an opportunity to play with an image generator. If you do not have access to a student-friendly one through Canva, <u>TwinPics</u> or the like, have students work in groups to create a prompt for an image and then the teacher can put the prompt into an image generator.



Lesson Seven - Artificial Intelligence & the Workplace

Access instructional PowerPoint (.pptx) - <u>Al Intermediate Lesson 7.pptx</u>
Access instructional video - Al Intermediate Lesson 7 Al and the Workplace

Lesson Overview:

This lesson invites students to think about their goals and vision for the future. It examines the impact of AI on current and future jobs and careers.

Video: Ethics& AI: Privacy and the Future of Work https://www.youtube.com/watch?v=zNxw5gJtHLc

Extension Activity:

Give students a chance to do some research on how Al might affect certain industries in the future. Here is a list of videos they could watch:

- Intro: Everyday Life
- Blind and Visually Impaired
- Robots (sports)
- Food
- Farming
- Great Barrier Reef
- Education



SECONDARY ARTIFICIAL INTELLIGENCE LESSONS

Lesson One – What is Artificial Intelligence?

Access instructional PowerPoint (.pptx) - <u>Al Secondary Lesson 1.pptx</u>
Access instructional video - Al Secondary Lesson 1 What is Al

Lesson Overview:

Tell students this lesson covers concepts about Al's construction and signals topics to be covered in the lessons that follow. See what other topics might interest students as well.

Key concepts include:

- Common AI types: Reactive, Predictive, Generative
- Neural Networks
- Large Language Models (and copyright implications)

Video: How AI Works: Chatbots and Large Language Models https://www.youtube.com/watch?v=X-AWdfSFCHQ

Extension Activity:

Have students explore machine learning by accessing the Teachable Machine website: https://teachablemachine.withgoogle.com/

No log in is required. The safest for-school activity to do would be Image Project but rather than having students take pictures of themselves that are identifiable, have them take pictures of their hands in the "rock-paper-scissors" shapes so that they can teach the machine to identify the parts of the game.

Lesson Two – Using Artificial Intelligence Responsibly

Access instructional PowerPoint (.pptx) - Al Secondary Lesson 2.pptx

Access instructional video - Al Secondary Lesson 2 Using Al Responsibly

Lesson Overview:

This lesson has several sub-topics. The beginning is a discussion of how data is used to train AI through Large Language Models and the implications for personal data and privacy considerations. The second sub-topic is about plagiarism, cheating, and academic integrity. Teachers will want to be aware of their district and/or school guidelines around AI use, citing sources, and codes of conduct. **Consider extending this lesson over several sessions.**

Extension Activity:

Very few people read the "fine print" when using a digital tool or app. As a result, people do not generally know what data is being collected from them and what is being done with that data. Have students do this scavenger hunt to practice locating information about data. NOTE: Remind students that not all of the tools that they are looking at have been approved for student use. However, they do not need to have accounts to find this information.



Lesson Three - Prompting, Bias & Hallucinations

Access instructional PowerPoint (.pptx) - <u>Al Secondary Lesson 3.pptx</u>
Access instructional video - <u>Al Secondary Lesson 3 Prompting Bias and Hallucinations</u>

Lesson Overview:

This lesson practices using **RACE** as a strategy for crafting effective AI prompts.

Role

Action

Context

Expected Outcome

This leads to a discussion of bias and hallucinations in AI reactions and responses.

Video: 3 Types of bias in Al/Machine Learning - https://www.youtube.com/watch?v=59bMh59JQDo

Teacher talking points for discussion: What biases do students note here?

- Gen Al was largely trained with data from the internet, which is already biased.
- Depending on student understanding and time, it might be interesting to have a quick discussion on how common biases can be changed or alleviated when it comes to training AI.

Video: How and Why does AI Hallucinate? https://www.youtube.com/watch?v=WowYXubbMtA

Teacher talking points for discussion: What would be the dangers of AI hallucinations with regards...using AI for assignments?...using AI for advice on real-world issues?

Extension Activity:

To practice the act of prompting, use <u>Twin Pics</u> or a locally approved application.

Alternatively, give the students a chance to practice the RACE acronym with a variety of tasks in mind.

Lesson Four – Ethics, Deepfakes & Disinformation

Access instructional PowerPoint (.pptx) - <u>Al Secondary Lesson 4.pptx</u>
Access instructional video - <u>Al Secondary Lesson 4 Ethics - Deep Fakes and Disinformation</u>

Lesson Overview:

This lesson contains several sub-topics.

It begins with a general discussion of ethics. Scenarios are presented where ethical and critical thinking skills need to be applied. Discussions may be in small groups or whole class.

Here are Al-related information points to support teachers with the discussion.

The next topic is Deepfakes.

Video: Deepfakes: How to Spot Them - https://www.youtube.com/watch?v=IOyrbsNcXt8



Teacher talking points for followup:

Deepfakes are a type of media that has been changed using AI to look or sound real, even though it's not.

- This could be a video of someone saying something they never actually said, or a photo that's completely fake but looks real.
- The problem with deepfakes is that they can be used to spread false information and trick people. For example, someone might believe a fake video is real news.
- Deepfakes can also damage a person's reputation if they show them doing or saying something inappropriate or untrue.
- As deepfakes get more realistic, it becomes harder to tell what's real and what's fake online. That's why it's important to think critically, check sources, and ask questions about what we see and hear on the internet.

The final topic provides a definition of misinformation vs disinformation. Misinformation is often accidental. Disinformation is intentional.

Extension Activity:

Al presents us with many ethical issues. <u>This activity</u> is a continuation of the discussion dilemmas presented in the slide deck.

Lesson Five - The Energy Behind Artificial Intelligence

Access instructional PowerPoint (.pptx) – <u>Al Secondary Lesson 5.pptx</u>
Access instructional video – Al Secondary Lesson 5 The Energy Behind Al

Lesson Overview:

This lesson poses questions about Al's impact on society from a resource perspective and a life balance perspective.

It provides an overview of the resources that are required to generate Al. These include energy use, non-renewable resources (i.e. rare minerals), and clean water.

Students are asked to consider their own use of technologies and AI, and to explore ways to lower that energy consumption level.

NOTE: if this a new discussion for students, consider looking at this video on Al & Sustainability which is also referenced in an intermediate level lesson.

Extension Activity:

Have students learn about their carbon footprint by doing the online carbon calculator activity: https://carbon-calculator.climatehero.org/



Lesson Six - Creativity and Artificial Intelligence

Access instructional PowerPoint (.pptx) - <u>Al Secondary Lesson 6.pptx</u> Access instructional video - Al Secondary Lesson 6 Creativity and Al

Lesson Overview:

Students will consider their definition of creativity. It considers whether machines and AI can be creative, and we perceive AI-generated art.

Video: Does Al Have Creativity and Imagination? https://www.youtube.com/watch?v=X994dDnmRmY

Lesson Activity:

Divide the class into 4 groups or smaller groupings to consider the questions on the ppt or video. Select one question to discuss and report on to the class. NOTE: These are the kinds of questions that artists, tech creators, and communities are still debating today.

Extension Activity:

The place where AI and creativity mix can be very emotional for some people, especially when we are discussing the arts. <u>Day of AI</u> has some excellent activities for secondary students. NOTE: you will need to register with your email address to be able to access the lessons and activities.

Lesson Seven - The Future

Access instructional PowerPoint (.pptx) - <u>Al Secondary Lesson 7.pptx</u>
Access instructional video - <u>Al Secondary Lesson 7 The Future</u>

Lesson Overview:

This lesson invites students to think about their goals and vision for the future. It examines the impact of AI on current and future jobs and careers.

Video: Ethics & AI: Privacy & the Future of Work https://www.youtube.com/watch?v=zNxw5gJtHLc

Teacher talking points for discussion for the following slides:





Al is like a super-smart assistant that can help people with their jobs. It's a tool that can learn, spot patterns, and make decisions quickly.

Here are some ways AI is being used at work:

- In Hospitals:

- o Al helps doctors read X-rays and find signs of illness faster.
- o It can keep track of patient records and help schedule appointments.

In Offices:

- o Al writes emails, reports, or summaries.
- o It can organize calendars and meetings.

In Delivery and Warehouses:

- Robots use AI to move packages and find the fastest routes.
- Self-driving trucks are being tested to deliver goods.

- In Creative Jobs:

- Al can create music, design logos, or even write poems
- People use AI as a tool to get ideas or speed up the creative process.

- In Stores and Restaurants:

- Self-checkout machines and voice assistants use Al to help customers.
- o Al helps track what items are in stock and what needs to be ordered.

Examples of where AI is replacing human workers

- · Taxi / Uber driver self driving cars
- · Cashier robotic check out kiosks
- · Factory workers industrial robots
- Customer service reps customer service chat bots

Can students think of any examples they have heard where AI might be replacing workers? Why might it be happening in these examples? Answers might include:

- Self-driving cars convenience, less expensive than taxi/Uber, increased safety, less congestion
- Cashier efficiency, less operating costs to the vendor
- Factory workers robots don't tire or get ill. They are able to do repetitive and complex tasks precisely, without breaks. Results in savings for business over the longterm





Even as Al grows, certain human skills remain crucial because Al cannot fully replicate them.

- Problem solving: Humans can understand complex, real-world problems, think critically, and adapt solutions when new challenges arise.
- Communication: We know how to read emotions, use tone, and tailor our message for different audiences, skills beyond simple data exchange.
- Creativity: We can imagine completely new ideas, combine unexpected concepts, and take creative risks. Al follows patterns; we invent them.
- Collaboration and teamwork: Working well with others involves negotiation, compromise, kindness, and shared responsibility, social skills that machines lack.
- Empathy: Understanding how someone feels and responding with compassion is uniquely human and essential in many jobs.

Class Discussion:

- How are you already practicing these skills in school, at home, or with friends?

Encourage students to share examples, maybe they solved a tricky math problem, helped a teammate, wrote a story, or listened to a friend who was upset.

Extension Activity:

Give students a chance to do some research on how Al might affect certain industries in the future. Here is a list of videos they could watch:

- Intro: Everyday Life
- Blind and Visually Impaired
- Robots (sports)
- Food
- <u>Farming</u>
- Great Barrier Reef
- Education



ACKNOWLEDGEMENTS

This lesson was created using Canva. Ideas and resources came from:

- <u>Day of AI</u>, (dayofai.org) under Creative Commons Attribution-Noncommerical-ShareAlike 4.0 International License
- Code.org (code.org)
- <u>Common Sense Media</u> (commonsense.org/education)
- Media Smarts (mediasmarts.ca)
- <u>Google's Be Internet Awesome</u> (beinternetawesome.withgoogle.com)

All videos used were obtained on Youtube, and have the link within them.



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APPENDICES

Appendix A – Be the Robot Exploring Sensors

Goal:

Help students understand what sensors do by pretending to be robots that respond to different "sensor" signals.

Materials:

- A big open space (like a classroom or gym)
- Paper signs (optional, but helpful!)

Instructions:

Tell students:

"Today, you're going to pretend to be *robots*! Robots can't think for themselves, but they have **sensors** to help them figure out what to do!"

Then explain the three main types of "sensors" we'll be pretending to use:

- 1. Eyes (seeing things)
- 2. Ears (hearing things)
- 3. Skin (feeling touch or bumps)

How to Play:

Round 1: Eye Sensor

- Teacher holds up a colored shape (or just waves a hand).
- Kids (robots!) must move only when they see the signal.
- If they don't "see" it, they stay still!

Example: "If you see me hold up a red card, take two robot steps forward!"

Round 2: Ear Sensor

- Teacher says a sound or word (e.g., "Beep!" or "Go!")
- Kids only move when they hear the signal.

Example: "When I say 'Beep Beep!', jump like a robot!"

Round 3: Touch Sensor

- Kids get into pairs.
- One student gently taps the other's shoulder (pretending to be a bump sensor).
- The "robot" can only move when tapped.

Example: "Tap your robot, and they walk to the door!"

Wrap-Up Discussion (2-3 min):

Ask:



- "What helped your robot body know when to move?"
- "What did the sensor do?"
- "Do real robots have things like eyes and ears like we do?"

Let them share and connect the pretend play to real robot sensors!

Optional Extension (5–10 min):

Have students draw their own robot and add pretend sensors to it:

- Eyes
- Ears
- Buttons
- Antennas

Label the sensors if possible: "This helps my robot hear," etc.



Appendix B – Primary Sorting Data Lesson

Lesson Title: "Sort It Out!"

Grade: Primary Duration: 45 minutes

Big Idea: We can sort things in different ways to help us learn and understand. **Curricular Focus:** Early data literacy – sorting and classifying items by attributes.

Learning Objectives:

- Sort and organize objects by one or more attributes (e.g., color, size, shape).
- Explain their sorting rule.
- Compare different ways of sorting the same group of objects.

Materials:

- A big collection of classroom-safe objects (buttons, toy animals, LEGO pieces, foam shapes, counters, or printed pictures)
- Hula hoops or masking tape circles on the floor (for sorting zones)
- Sorting Rule Cards (e.g., "Sort by color," "Sort by size," "Sort by type")
- Chart paper or whiteboard
- Optional: Labels or stickers

Warm-Up Activity: "I Belong Here!" (10 minutes)

- 1. Clear a space in the room.
- 2. Teacher calls out a sorting rule:
 - "If you're wearing red, stand over here. If not, stand over there!"
 - Try other rules: by eye color, number of letters in name, shoe type (velcro/laces), birthday month (season), etc.
- 3. Ask after each sort: "What rule did I use?" and "What other rule could I use to sort you?"

Main Activity: "Mystery Sort" (25 minutes)

Step 1: Group Sorting (10 minutes)

- 1. Put students into small groups (2-4 students).
- 2. Give each group a pile of mixed objects and a "Sorting Zone" on the floor or table.
- 3. Students sort however they choose without telling anyone the rule at first.
- 4. Groups walk around and guess each other's sorting rule.
- Prompt them with questions:
- "How did you sort your items?"
- "Could you sort them a different way?"

Step 2: Sorting Challenge (10 minutes)



- 1. Hand each group a **Sorting Rule Card** (e.g., "Sort by shape").
- 2. Students re-sort the same objects using the new rule.
- 3. Repeat with a second or third rule if time allows.

Reflection & Sharing (10 minutes)

Come back together as a class.

- Ask:
 - "What ways did you sort your objects?"
 - "Did anyone use more than one rule?"
 - "Can you think of a time outside school when people sort things?" (e.g., laundry, groceries, recycling, LEGO bricks, books)
- Create a class chart titled "Ways We Can Sort" with their ideas.

Optional Extension Ideas:

- Art Link: Create sorting collages using magazines (cut and glue by color or category).
- Math Link: Make a pictograph showing how many of each item were in each group.
- **Digital Link:** Use a tablet app or website like Toy Theater or ABCya for simple sorting games.



Appendix C – Partner Robots

Object: Students will experience writing and debugging basic visual code to make their partner move around the room.

Steps: Talk about the fact that robots only do what humans tell them to do. Tell them they are going to practice being a robot programmer and being a robot.

Robots don't understand English - so how are we going to tell them what to do? Hopefully someone will give you the answer of "symbols" or "code". At that point, you can talk about the "code" you are going to use today. The code has 4 letter symbols in it:

- F, B, R and L. They stand for Forward, Backward, Right and Left. It's a good idea here to have a discussion about what each of these means. When I do it, this is what I use:
 - o F one step forward
 - o B one step backwards
 - o R one 90 degree turn to the right
 - o L one 90 degree turn to the left

Have the students pair up, with one student starting as the "programmer" and one as the "robot". The programmer will need a piece of scrap paper and a pencil.

I usually have the team start at the robot's desk and give the programmer the challenge of writing code that will get the robot to some place in the room, like the door, the teacher's desk or the sink.

The programmer can walk the route as they write their code, but the robot must wait. It cannot move until the programmer hands it the code.

Let the students know that it's okay to make mistakes - all programmers do! If they make a mistake, they need to fix, or "debug", their code!

Once a team has reached their goal, they can switch roles and you can give them another goal.

A challenge you can give them is to add a task like "get to the teacher's chair and sit in it". See if they can create new code that would allow the robot to do that.

Another challenge is to have them work in teams of two to write a robot code that they give to another team to see if it works for them.

If the kids are experienced coders, add in loops and conditional statements!

As a debrief, talk about what worked well, what was hard, what they learned, etc. Hopefully they'll come up with some great observations!



Appendix D - Intermediate Lesson 4 - Ethics Student Activity

Option 1: Whole-Class Discussion

- 1. Begin by explaining what an ethical dilemma is: a situation where there is no clear right or wrong answer, and where you have to think carefully about what is fair, responsible, and respectful.
- 2. Read each scenario aloud and ask students to share their initial thoughts.
- 3. Use guiding questions like:
 - What are the possible choices someone could make in this situation?
 - Who might be affected by the decision?
 - What values or rules are involved?
 - Is there a solution that feels the most fair or responsible?
- 4. Encourage students to respectfully agree or disagree and explain their thinking.
- 5. Use a whiteboard or chart to record different points of view for each scenario.

Option 2: Jigsaw Activity

- 1. Divide students into small groups and give each group one ethical scenario.
- 2. Ask groups to:
 - Read and discuss the scenario together
 - · Identify the ethical dilemma
 - Share opinions or possible actions
 - Decide on what they think is the most fair or ethical response, and why
- 3. After discussion time, have one student from each group present their scenario and group thinking to the rest of the class.
- 4. Invite other students to ask questions or add different viewpoints.
- 5. Wrap up with a reflection:
 - What makes these dilemmas difficult?
 - What did we learn about AI and ethics?



Appendix E – What is Ethics? Support Points for Teacher-Led Discussion

These points are in support of discussions in Intermediate and Secondary lessons on the topic of ethics.

Data Privacy and Security:

- When we use AI tools, we often give them information, sometimes even personal details.
- If we are not careful, that data could be stored, shared, or misused without us knowing.
- It is important to read privacy policies, only use school-approved tools, and avoid sharing private or sensitive information online.

Bias and Hallucinations

- Al learns from human-created data, which can include unfair patterns or stereotypes.
- Because of this, Al might give results that are biased or treat some people unfairly.
- All can also hallucinate, which means it makes up information that sounds real but is not true.
- That is why we need to double-check what AI tells us using trusted sources.

Academic Misconduct

- If students use AI to complete assignments without doing the thinking themselves, that is considered cheating.
- Copying AI responses and pretending it is your own work goes against academic honesty.
- Students should always be clear with their teachers if they use AI for help, and make sure the final work is truly their own.

Dependence on Technology

- While AI can be helpful, relying on it too much can stop students from developing important thinking and problem-solving skills.
- It is important to learn how to use Al as a tool, not a shortcut.
- We want students to stay curious, think for themselves, and build confidence in their own abilities.



Appendix F - Artificial Intelligence Tool Terms & Conditions Scavenger Hunt

Objective:

Students will learn how to critically examine the privacy and usage policies of popular AI tools and extract relevant safety information.

Time Required: 45–60 minutes **Group Size:** Pairs or small groups

Materials:

- Laptops/tablets with internet access
- A handout or digital template with a scavenger hunt checklist
- Optional: Printed excerpts from Terms of Use pages

INSTRUCTIONS

Intro Discussion (10 mins):

- Ask: "When you use an Al tool, do you know what happens to your data?"
- Explain that AI tools often collect data, learn from users, and have specific rules around use.

Scavenger Hunt (25–30 mins):

Each group chooses (or is assigned) one or two common AI tools (e.g., ChatGPT, Magic School, Canva, School AI, Perplexity, etc.)

NOTE: Students should not have to log in to answer these questions - they can find the information in the Terms of Use and Privacy Policy, which should be linked on the front page of these Al tools.

They must find and answer:

- What type of data does the tool collect?
- Can it use your inputs to improve itself?
- Does it store your data?
- Are there age restrictions?
- Are you allowed to use it for schoolwork?
- Can the tool's content be trusted as fact? Why or why not?

Wrap-up Discussion:

- What surprised you?
- Which tool seemed the most/least safe?
- How can you protect yourself when using AI?



Appendix G - Artificial Intelligence Ethical Dilemma Speed Rounds

Objective:

Students will explore real-world ethical issues involving AI through discussion, collaboration, and personal reflection.

Time Required: 45-60 minutes

Group Size: Small rotating groups (3–4 students)

Materials:

- Printed or digital dilemma cards (examples below)
- Chart paper or response handouts

Instructions:

- 1. Intro (5–10 mins):
 - Present a simple ethical question: "Should AI be allowed to grade your essays?" Discuss briefly.
 - Explain students will tackle multiple ethical Al dilemmas today.
- 2. Dilemma Stations (25-30 mins):

Set up 4–5 stations, each with a short scenario. Students rotate every 5–6 minutes. Example dilemmas:

- Hiring Bias: A company uses Al to screen job applications, but it tends to favor certain names or schools.
- Surveillance AI in Schools: Cameras use AI to detect student behavior. Is this for safety or invasion of privacy?
- Predictive Policing: Police use AI to predict where crimes might happen. It targets low-income areas more often.
- Healthcare Al: Al helps diagnose patients. What if it makes a mistake?
- Al Friends: A student relies on an Al chatbot for emotional support. Is that healthy?
- 3. At each station, students answer:
 - What's the ethical issue?
 - Who is affected?
 - Is this use of Al fair? Why or why not?
- 4. Debrief Discussion (10-15 mins):

Ask students:

- Which scenario was the hardest to decide on?
- What values are at stake (privacy, fairness, equity, etc.)?
- Who should be responsible for AI decisions?
- Extension/Assessment:

Students choose one dilemma and write a short persuasive paragraph explaining their position.



Appendix H - Reference Posters

The BC Ministry of Education and Child Care has created posters in English and French for 'what you need to know about Al' at the elementary, middle and secondary grade levels.

 $\underline{https://www2.gov.bc.ca/gov/content/education-training/k-12/administration/program-management/ai-ineducation\#04f1f6ebf47584b284cbcfbc04867f1e}$