Pearson

EBLANA LEARNING

AI Workbook

for IB PYP Students

Hello, AI





FREE SAMPLE

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1 What is AI?

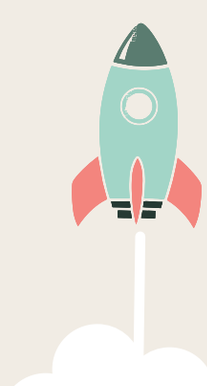
AI is a machine that learns from data to recognize patterns and make decisions, just like you learn from practice and examples.

What this unit is about

In this unit, we will look at how AI 'thinks'. You will discover that AI isn't magic—it is a tool that uses step-by-step instructions called **algorithms** to solve problems. We will explore how machines learn by finding patterns in the world around us. By the end of this unit, you will be able to spot the difference between a regular computer and an AI helper.

Why it matters

AI is already a part of your daily life. Understanding how AI makes **decisions** will help you become a smarter user of technology. Once you know how patterns work, you can help shape how machines assist our global community. This knowledge will give you the power to use AI as a creative partner for your own ideas.



How you'll learn

You will become a 'pattern detective' through hands-on inquiry and play. By sharing your discoveries with classmates, you will build a toolkit for digital discovery.

IB Connections

Transdisciplinary Theme: Who We Are — How does technology reflect human learning and our responsibilities when creating 'thinking' machines?

Learner Profile: Knowledgeable and Thinkers — You will develop a clear understanding of AI concepts and apply your critical thinking to identify pattern recognition in everyday life.

ATL Skills: Thinking skills and Research skills — You will categorize data and practice information literacy by observing how AI helpers gather and use information.

Concepts: We will inquire into how AI functions by exploring how it identifies patterns to make logical predictions.

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1.1 Prior knowledge and misconceptions probe

Communication skills | Self-Management skills | Thinking skills

I wonder... what do you think happens inside the 'brain' of a computer? Great inquiry starts by exploring our current ideas — even if we discover later that some of them were just myths!

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KWL+ Chart

1 Fill out the K and W boxes now, before starting the unit. Return to the L box at the end of the unit.

K What I KNOW	W What I WONDER	L What I LEARNED

True or false misconception cards

Complete the following true or false activity.

A

AI systems like **voice assistants** can tell when I am feeling sad and truly care about my feelings.

☐ TRUE ☐ FALSE

Why do you think so?

B

An **algorithm** is like a recipe that tells AI exactly which steps to follow to make a **decision.**

☐ TRUE ☐ FALSE

Why do you think so?

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C AI can 'learn' how to recognize my face just by looking at thousands of different **patterns** in photos.

☐ TRUE ☐ FALSE

Why do you think so?

D AI is a type of magic that knows the answer to everything without needing any information from humans.

☐ TRUE ☐ FALSE

Why do you think so?

E Because AI uses **data**, every **recommendation** it gives (like what video to watch next) is 100% correct for me.

☐ TRUE ☐ FALSE

Why do you think so?

F AI 'thinks' exactly the same way a human brain does because it has its own opinions and dreams.

☐ TRUE ☐ FALSE

Why do you think so?

Draw what AI looks like

2 Draw a picture of what AI looks like. Think about the questions.

There are no wrong answers! Use colours, shapes, words – anything.

Does it have a body? **What is it doing?** **Where does it live?**

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1.3 Thinking with AI prompt cards

Thinking skills

1 Explore how we use our minds to understand how machines learn and help us every day.

The Snack Robot

A robot is learning what a 'healthy snack' is. You give it **input** (**data**) like apples, carrots, and bananas.

Inquiry: How does the robot use **pattern recognition** to decide if a doughnut is a healthy snack? Draw the **rules** the robot might have in its **algorithm**.

Reflection: How is the way the robot learns **patterns** similar to how you learned your ABCs? EMERGING

The Helpful Assistant

A **voice assistant** helps your family. It knows when you say 'Play music', but sometimes it gets confused by a barking dog.

Inquiry: What specific **data** (sounds) does the assistant need to ignore to make a better **decision**? List three sounds it should 'filter out'.

Reflection: Why is it important for AI to connect the right sound to the right action? DEVELOPING

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The Movie Suggester

An AI gives you a **recommendation** for a new cartoon because you watched *Toy Story*. This is called **machine learning**.

Inquiry: If the AI only suggests movies about space, might you miss out on something else? Write a new **instruction** to help the AI suggest a variety of movies.

Reflection: Does the AI really know what you 'like', or is it just following a mathematical **pattern**? **DEVELOPING**

The Secret Code

AI looks for shapes in **data**. Look at these numbers: 2, 4, 6, 8... The next number is an **output**.

Inquiry: What is the **logic** behind this **pattern**? Create your own 'secret code' **pattern** and ask a partner to act like an AI to solve it.

My secret code:

Reflection: How does finding **patterns** help us organize the world around us? **EMERGING**

Teaching the Teacher

During **training**, an AI is shown 1,000 pictures of cats. Suddenly, it sees a tiger.

Inquiry: How should the AI's **logic** change? Should it call the tiger a 'big cat' or a 'new animal'? Explain your thinking.

Reflection: What happens to an AI's 'intelligence' when we give it new and different information? **MASTERING**

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1.7 Learner profile: Knowledgeable

Communication skills | Research skills | Thinking skills | Who we are

To be knowledgeable means we explore concepts, ideas, and issues that have local and global significance. In our AI journey, it means understanding that AI isn't magic — it's a tool that learns from patterns we provide.

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The Case of the Pattern Detective

Imagine you are teaching a new friend from another planet how to tell the difference between a cat and a dog. You can't just say 'it's a cat', you have to show them pictures and videos! You point out **patterns**: the shape of the ears, the sound they make, and how they move.

This is exactly how AI learns! It doesn't 'know' what a cat is; it knows the **data patterns** humans have shared with it. When we are knowledgeable about AI, we understand that we are the teachers and the AI is the student learning from our information.

Reflections

Use your thinking skills to explore how patterns help us grow our knowledge.

1 **What is a pattern or routine in your daily life that an AI helper (like a smart speaker or tablet) might notice about you? How does this help it be a better helper?**

2 **If AI learns from the information we give it, what is our responsibility as humans to make sure that information is fair and helpful for everyone in the world?**

3 **How does knowing that AI uses data instead of 'magic' change the way you think about the apps and games you use?**

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Trait in action: The data trainer challenge

4 Your mission: AI helps us solve problems by organizing data.

Choose one **daily AI helper** from the list below and explain what **patterns** it needs to **recognize** to work well.

- Smart fridge: Knowing when the milk is finished.
- Music app: Suggesting a song you might like.
- Spam Filter: Moving 'junk' mail to the trash.

Try It: Draw a **pattern** map below. Show three different examples of **data** (like pictures or words) the AI needs to see to learn its job.

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Collaborative inquiry

5 Perspective: AI can be used to help us express our culture and feelings (How We Express Ourselves). If you could build an AI 'Knowledge Assistant' to help people learn about your home country or culture, what is the most important **pattern** or piece of **data** it should know? Discuss with a partner and make some notes in the box below.

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My knowledgeable journey

6 How did you show your knowledgeable trait today? Circle your growth!

Emerging	Developing	Exemplifying
I can identify one thing AI does in my daily life.	I can explain that AI learns from human **data** and **patterns**.	I can explain how my human choices help shape what an AI learns to do.

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