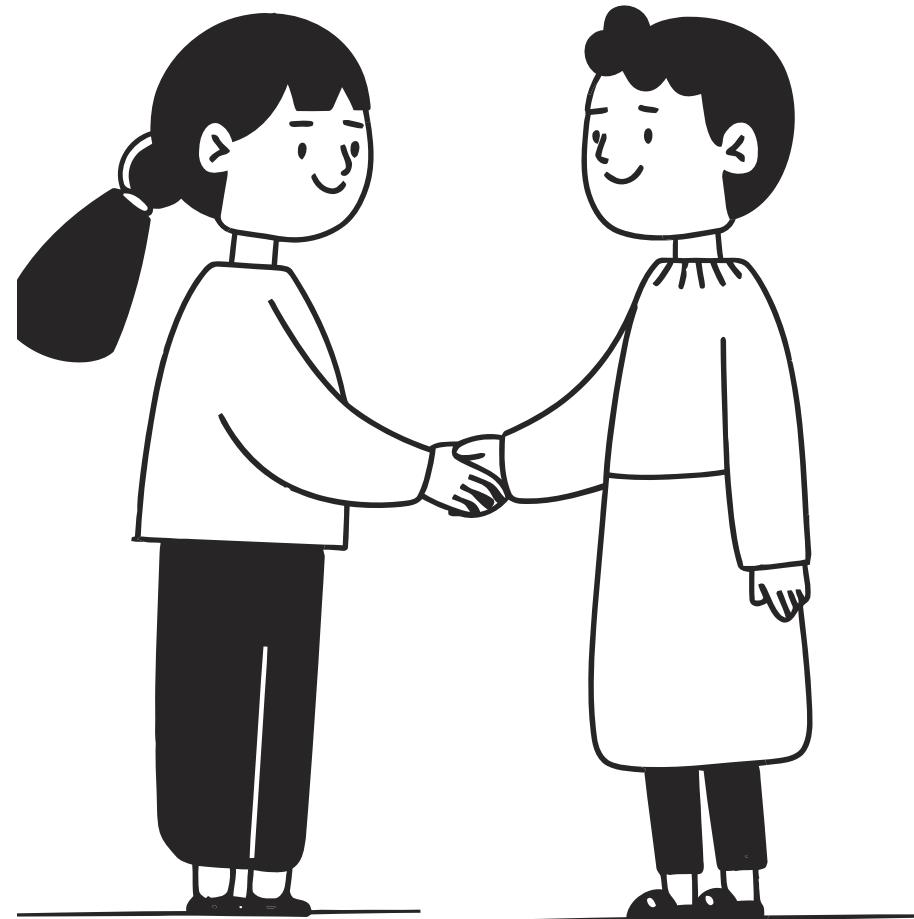


# What is Artificial Intelligence?

## Lesson 1: Introduction to AI

Grades 3-5



Today's Essential Question

**"What is artificial  
intelligence and how  
does it work in our daily  
lives?"**



# What Do You Already Know?

## Let's think together:

- Have you ever talked to Siri, Alexa, or Google Assistant?
- Have you played video games where the computer seems smart?
- Have you seen Netflix or YouTube suggest videos you might like?
- Have you used predictive text when typing?



Voice assistant



Video game



Streaming service



Smartphone keyboard

# So... What IS Artificial Intelligence?

Artificial Intelligence (AI) is when computers learn to do things that usually require human thinking and decision-making.

Learn

Patterns

Smart Decisions



# How Does AI Learn? The Pet Analogy



## Teaching a Dog

1. Show the trick many times
2. Give treats when correct
3. Practice, practice, practice
4. Dog learns the pattern!

## Teaching AI

1. Show many examples
2. Tell AI if correct or wrong
3. Give more examples
4. AI learns the pattern!

# AI is REALLY Good at Finding Patterns

Example Pattern:

Cloudy sky → Rain later 

AI looks at LOTS of examples to find patterns:

 **Thousands of cat pictures** → Recognizes cats

 **Millions of chess games** → Plays chess well

 **Your music choices** → Suggests songs you'll like

 **Weather data from years** → Predicts tomorrow's weather

# Where Do We See AI Every Day?



## Voice Assistants

Alexa, Siri, Google

"Hey Siri, what's the weather?"



## Recommendations

Netflix, YouTube, Spotify

"You might like this video!"



## Photo Recognition

Phone photo apps

"Search for pictures of dogs"



## Smart Typing

Predictive text

"I am go..." → "going"

# More AI in Our World!



## Video Games

Computer opponents that get better the more you play



## Healthcare

Helping doctors find diseases in X-rays



## Transportation

Self-driving cars (being tested!)



## Smart Homes

Thermostats that learn when you like it warm or cool



## Security

Face recognition to unlock your phone



## Email

Spam filters that block junk mail

# Human vs. AI: Who Does What Best?

Let's play a thinking game!

## Activity Time!

We're going to sort different tasks into three groups:

Humans Do Best

AI Helps

Both Work Together

# Discussion: What Did You Discover?

After sorting your cards, think about these questions:

01

**What makes some tasks better for humans?**

03

**Why do some tasks need BOTH?**

02

**What makes some tasks better for AI?**

04

**Can you think of a task we didn't include?**

# Humans + AI = Better Together!

AI doesn't replace humans.

AI helps humans work better and faster!

## Humans are Best At:

- Creativity
- Empathy & emotions
- Complex decisions
- Teaching & learning

## AI is Best At:

- Finding patterns
- Processing lots of data
- Repetitive tasks
- Fast calculations



# Let's Watch AI Learn! (Demo Time) 🎓

## Google's Teachable Machine

We're going to teach a computer to recognize different hand gestures!

👍 Thumbs Up

👎 Thumbs Down

✌️ Peace Sign

Watch how AI learns from examples, just like you do!

# What Did We Learn from the Demo?

## Key Takeaways:

 AI needs LOTS of examples to learn

 More training = Better performance

 AI can make mistakes (just like us!)

 AI learns from patterns in data

 Humans teach and guide the AI

# Important Things to Remember About AI

## AI is NOT like a human brain

It processes information differently and doesn't "think" like we do

## AI needs humans

Humans teach AI, check its work, and make important decisions

## AI learns from examples

The more good examples it sees, the better it gets

## AI can make mistakes

Especially if trained on bad or incomplete data

# Your Turn: AI Around Us!



## Worksheet Time!

Find 3 examples of AI in your daily life

For each example, tell us:

01

**Where do you see this AI?**

02

**What does it do?**

03

**How does it help people?**

You can draw pictures or write your answers!



## Share Your Discoveries!

Let's hear about the AI you found!

**Share with a partner first, then we'll hear from volunteers who want to share with the whole class!**

- Remember: There are no wrong answers!

AI is everywhere once you start looking for it.

# Exit Ticket Time!

Before you go, please answer:

1

**What is one thing you learned about AI today?**

2

**What is one question you still have about AI?**

Write your answers on your exit ticket!

# Great Job Today! 🎉

## You're now AI Experts!

**Today you learned:**



**What artificial intelligence is**



**How AI learns from examples**



**Where we see AI in daily life**



**How humans and AI work together**

**Challenge:** Talk to your family about AI tonight!

See how many AI examples you can find at home.

# Resources & Credits

## Recommended Resources for Further Learning:

- Google's Teachable Machine: <https://teachablemachine.withgoogle.com>
- AI4K12 Initiative: <https://ai4k12.org>
- Code.org AI for Oceans: <https://code.org/oceans>

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