

Education Program

PARSE Education Program

First Period

Time	Plans
0-5	About Us At the beginning of the session the educators tell the students about Hisar High School IdeaLab Students. They mention the projects that are created, the competitions that are entered like FRC. Then they start explaining and introducing PARSE. - Things to mention are - The aim of the project: Teaching the way artificial intelligence learns without any screens or applications. So in an UNPLUGGED way. - The target group: 10-14 year old students - Here is more detailed information about PARSE.
5-10	Pre Test The Pre Test is given to the students for them to fill out.
10-15	Here is the PDF Link for the Pre Test.
15-20	Module 1 Intro The Module Handbook is given to the students and they use the book and the educator's instructions to understand how to play the first module. - The educators need to read the module handbook and get in touch with the project creators if needed to fully understand the modules. - The educators must make sure the instructions are definitely understood by all the students.
20-25	Playing Module 1 The Module 1 kits are given to the students (1 Kit per 5 students) and they try to win the game in teams. Each educator observes a team and takes notes of the following:
25-30	- The number of tries
30-35	- The number of changes made on the circles

35-40	- The total time to win the game -  Parse Education Sessions Data Table
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Second Period

Time	Plans
0-5	Module 2 Intro The Module Handbook is given to the students and they use the book and the educator's instructions to understand how to play the second module. - The educators need to read the module handbook and get in touch with the project creators if needed to fully understand the modules. - The educators must make sure the instructions are definitely understood by all the students.
5-10	Playing Module 2 The Module 2 kits are given to the students (1 Kit per 2-3 students) and they try to win the game in teams. Each educator observes a team and takes notes of the following:
10-15	- The number of tries made for each disk and tube match - The number of changes made with the matches - The total time to win the game -  Parse Education Sessions Data Table
15-20	Module 3 Intro The Module Handbook is given to the students and they use the book and the educator's instructions to understand how to play the third module. - The educators need to read the module handbook and get in touch with the project creators if needed to fully understand the modules. - The educators must make sure the instructions are definitely understood by all the students.
20-25	Playing Module 3 1 kit per 15-20 students is played by the students. One of the educators starts the game by throwing the balls in with the plinko mechanism

	without showing any clue about the 5 balls' location. Then the educator asks for 2 numbers both being 1-5; one being the width, one being the length. These 2 numbers represent the ball location. Every single student is asked 2 numbers and when someone finds the location of a ball the student gets one point and the people that got points higher than 0 compete in a final game.
25-30	The educators observe the following: - Whether if the answers given by the students are true or false in order of the answers given - The location answers given by all the students -  Parse Education Sessions Data Table
30-35	Post Test The Post Test is given to the students for them to fill out.
35-40	Here is the PDF Link for the Post Test.

For the photos taken in the sessions [here](#) is the Google Drive.

Pre Test

Pre Test

[Canva PDF Link](#)

[Google Drive Link](#)

Question 1

When you're learning a new video game, how do you usually get better?

- A) You watch tutorials and memorize every rule before playing
- B) You try things, fail, and figure out what works over time
- C) You copy exactly what better players do every time
- D) You focus only on the parts you're already good at

Question 2

Your friend is guessing your favorite number between 1 and 10. You say "too high" or "too low" after each guess. What actually helps your friend find the answer?

- A) Guessing a completely different number every time
- B) Sticking with numbers they feel confident about
- C) Using your responses to narrow down the range
- D) Trying the most popular numbers first

Question 3

What do you think artificial intelligence actually is?

- A) A program that stores all possible answers and picks the right one
- B) A system that learns from experience and improves its decisions over time
- C) A machine that follows detailed rules written by engineers
- D) A tool that gets smarter the more powerful the computer it runs on

Question 4

You got a wrong answer on a test. What's the most useful thing that could happen?

- A) Your teacher gives you the correct answer right away
- B) You go back and figure out exactly where your thinking went wrong
- C) You redo the whole test from the beginning
- D) You pay more attention next time without changing your approach

Question 5

You're trying to unlock a combination lock without knowing the code. What's the smartest approach?

- A) Start from 0000 and work your way up in order
- B) Try combinations that feel right based on instinct
- C) Keep track of what you've tried and cross out what doesn't work
- D) Focus on combinations that almost worked before

Question 6

Spotify keeps recommending songs you actually like. How do you think it gets better at this over time?

- A) It tracks which songs are most popular among all users
- B) It learns from what you personally skip, replay, or like
- C) It updates its recommendations based on new releases
- D) It uses your age and location to guess your taste

Question 7

What does feedback actually do in a learning process?

- A) It confirms what you already know
- B) It speeds up the process by skipping wrong options
- C) It tells you whether what you did moved you closer or further from the goal
- D) It gives you a reward when you do something right

Question 8

If someone never finds out whether their answers are right or wrong, what happens?

- A) They develop their own system which might still work
- B) They can't know what to fix, so improvement is very limited
- C) They eventually figure it out through repetition
- D) They become more creative because there are no constraints

Question 9

When is making mistakes actually necessary in learning?

- A) Only when you're learning something completely new
- B) When there's no other way to get information about the problem
- C) Mistakes are never necessary — they just slow things down
- D) Only in the early stages before you build a strategy

Question 10

Can someone understand how AI works without ever using a computer?

- A) Only if they have a strong background in math
- B) Yes, because the core logic is about thinking and decision-making, not technology
- C) Partially, but you eventually need to see it in code
- D) Only for very simple AI concepts, not real ones

Pre Test Answer Key

Pre Test Answer Key

- Question 1 — B
- Question 2 — C
- Question 3 — B
- Question 4 — B
- Question 5 — C
- Question 6 — B
- Question 7 — C
- Question 8 — B
- Question 9 — B
- Question 10 — B

Post Test

Post Test

[Canva PDF Link](#)

[Google Drive Link](#)

Question 1

After the modules, how would you explain AI to a younger kid?

- A) A system that already has all the answers stored inside it
- B) A program that gets smarter the more expensive the hardware is
- C) A system that starts knowing nothing and improves by trying and learning from mistakes
- D) A machine that learns by watching what humans do and copying it

Question 2

In Module 1 with 64 combinations, what was the smartest strategy?

- A) Focus on combinations that feel logically correct
- B) Try everything systematically and eliminate what doesn't work
- C) Start with the combinations most likely to be right
- D) Repeat combinations that almost worked

Question 3

How does a navigation app like Google Maps get better at suggesting routes?

- A) Engineers regularly update the map with better routes
- B) It picks the route that most people use
- C) It learns from real trip data and adjusts based on what actually works
- D) It calculates the mathematically shortest path every time

Question 4

In Module 2, every time a piece didn't fit you removed it from your options. What is this most similar to in AI?

- A) The system storing successful outcomes for later
- B) The system narrowing down possibilities using feedback
- C) The system resetting and starting fresh after each mistake
- D) The system prioritizing the most common correct answer

Question 5

In Module 3 you couldn't see where the ball went directly. How did you figure it out?

- A) You used the pattern of previous attempts to reason about the likely path
- B) You tried every option until one worked
- C) You focused on the areas where the ball most likely lands
- D) You repeated the same setup until the result became clear

Question 6

Your attempt count went down over time in the activities. What does that actually mean?

- A) The activity became objectively easier as you progressed
- B) You started skipping steps to save time
- C) Your past experience was helping you make better choices
- D) You got lucky more often in the later rounds

Question 7

A dog learns that sitting earns it a treat. An AI learns that a certain move wins a game. What do these have in common?

- A) Both are responding to rewards that reinforce certain behaviors
- B) Both are following a set of rules someone programmed in
- C) Both are copying the behavior of others around them
- D) Both are improving because they're doing the same action repeatedly

Question 8

Why does YÖDEN working without screens or computers actually matter?

- A) It proves that physical learning is always more effective than digital
- B) It makes the activity accessible to people without technology
- C) It shows that the logic behind AI is about thinking, not tools
- D) It removes distractions so students focus better

Question 9

What's the real difference between memorizing something and learning it?

- A) Memorizing is quicker so it works better under pressure
- B) Learning takes longer but gives you deeper knowledge
- C) Learning means you can apply it in new situations, memorizing just lets you repeat it
- D) There's no real difference if the outcome is the same

Question 10

What's the most honest description of how AI learns, based on your experience?

- A) It is given the correct answers first and then learns to reproduce them

- B) It tries, gets feedback, eliminates what fails, and gradually improves
- C) It learns by observing patterns without ever making mistakes
- D) It builds a perfect model on the first try and refines the details after

Post Test Answer Key

Post Test Answer Key

- Question 1 — C
- Question 2 — B
- Question 3 — C
- Question 4 — B
- Question 5 — A
- Question 6 — C
- Question 7 — A
- Question 8 — C
- Question 9 — C
- Question 10 — B

Question Tables

Table 1. Representative transfer question (Module 1 — Random Search)

Selin is trying to open a combination lock. There are 2 dials, each with 8 positions. Only one combination opens it. The lock gives no sound or signal for wrong attempts.

What is the best strategy for Selin?

- A) Try random combinations repeatedly, some may repeat.
- B) Try each combination once in a fixed order, never repeating. ✓**
- C) Start from the middle positions and work outward.
- D) Choose combinations that feel right.

Table 2. Representative transfer question (Module 2 — Iterative Refinement)

Elif and Kerem are playing a code-breaking game. There is a secret 3-digit code; each digit can be 1–4 (64 possible codes). Elif enters a guess and the game responds: "Your first digit is correct."

How many possible codes remain for Elif now?

- A) Still 64 — knowing one digit does not help.
- B) 60 — One digit was found, so 4 options are gone.
- C) 16 — first digit is fixed; only second and third remain open. ✓**
- D) 4 — only the last digit matters now.

Table 3. Representative transfer question (Module 3 — Statistical Inference From Accumulated Evidence)

A geologist is looking for 5 mineral deposits across a 5x5 grid. Each confirmed find permanently eliminates that cell. After many drills, 3 deposits have been found.

How should the geologist search for the remaining minerals?

- A) Start over and search every cell (even the searched ones).
- B) Search near the found minerals.
- C) Only search the cells that have not been searched yet. ✓**
- D) Recheck the places where mineral has been found to see if there are any left.