

Elective Algorithm Design

Activity Sheet 1

Name: _____

Date: _____

Engage: Who Gets What Class?

The principal at Morgan Middle School has a list of students who need to be placed in elective classes. Electives are called that because they are classes students get to “elect” or choose, like Art, robotics, theater, or PE. They are different from required classes like math or reading.

The principal has information about each student, including:

- **GPA** (grade point average — how well they’re doing in their classes overall)
- **Attendance** (how often they come to school)
- **Behavior** record (how many times they’ve been flagged for breaking school rules)
- **Teacher notes** (information/opinions from their teachers about their learning or personality)
- The elective they **picked out for themselves** during registration

Your challenge: Step into the principal’s role and decide which class each student should get. As you decide, think about:

- What class would help this student grow?
- Are there any challenges or learning needs that might make a certain class a better fit?
- Which students should simply get the elective they picked? Should they all?



Elective Class Options at Morgan Middle School:

- Art Design
- English Language Support
- PE
- Silent Study Hall
- Speech and Debate
- STEM and Robotics Lab
- Theater

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Activity Sheet 2

Name: _____

Date: _____

Student	GPA	Attendance	Behavior Flags	Teacher Notes	Student Selection	Your Placement
Layla	3.8	98%	0	"Very driven"	STEM and Robotics Lab	
Manny	2.9	97%	1	"Engaged and artistic. English is 2nd language"	Art Design	
Taylor	2.4	90%	4	"Causes a lot of drama, seems upset in Math"	Theater	
Mariah	3.5	99%	1	"Loves sports, lacks creativity"	PE	
Isaac	3.0	95%	3	"Falls asleep in class a lot"	PE	
Rina	3.9	98%	0	"Strong work ethic. English is 2nd language"	STEM and Robotics Lab	
Malik	3.5	96%	4	"Makes a lot of jokes, talks a lot, well-liked"	Speech and Debate	
Jayden	4.0	80%	0	"Great at Math, seems bored"	Art Design	
Nora	2.1	63%	2	"Misses a lot of class, so smart."	Theater	

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Activity Sheet 3

Name: _____

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Explore: AI's Class Assignments

Now compare the elective assignments you made to the ones assigned by an AI:

Student	GPA	Attendance	Behavior Flags	Teacher Notes	Student Selection	AI Placement
Layla	3.8	98%	0	"Very driven"	STEM and Robotics Lab	STEM and Robotics Lab
Manny	2.9	97%	1	"Engaged and artistic. English is 2nd language"	Art Design	English Language Support
Taylor	2.4	90%	4	"Causes a lot of drama, seems upset in Math"	Theater	Silent Study Hall
Mariah	3.5	99%	1	"Loves sports, lacks creativity"	PE	PE
Isaac	3.0	95%	3	"Falls asleep in class a lot"	PE	Silent Study Hall
Rina	3.9	98%	0	"Strong work ethic. English is 2nd language"	STEM and Robotics Lab	English Language Support
Malik	3.5	96%	4	"Makes a lot of jokes, talks a lot, well-liked"	Speech and Debate	Silent Study Hall
Jayden	4.0	80%	0	"Great at Math, seems bored"	Art Design	STEM and Robotics Lab
Nora	2.1	63%	2	"Misses a lot of class, so smart."	Theater	Theater

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Activity Sheet 4

Name: _____

Date: _____

Initial Reflection – AI Ethics Vocabulary

Word	Definition	Image of your own
Fair	Treating people the same way and asking them to follow the same rules, regardless of who they are.	
Equitable	Giving everyone what they need to succeed, even if it's not the same.	
Ethical	Making decisions that do not harm others. Thinking about who might be treated unfairly and making sure the system does what is right for everyone, not just what is easy and popular.	

Reflection

- ① Do you think the AI's decisions were fair, equitable, and ethical? Why or why not?

- ② Which data seemed to have the biggest impact on how the AI made its elective placement decisions?

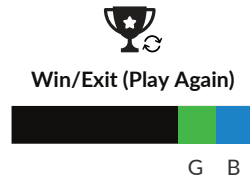
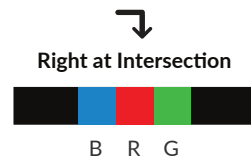
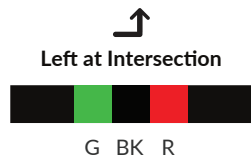
- ③ If you were designing the AI system from scratch, what would you do differently to make it more fair or effective?

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Activity Sheet 5

Name: _____

Date: _____



STEM and
Robotics
Lab

Silent
Study
Hall

English
Language
Support

Start

Is the students GPA 3.6
or above?

If Yes → Turn Right

Does the student have 3 or
more behavior flags?

If Yes → Turn Right

Is English the students
2nd Language?

If Yes → Turn Right

First
Choice
Class