

**ELEUSIS**

(20 minutes)

OBJECTIVE

Students work together to create and decode patterns.

- ✓ The groups take turns creating and deciphering patterns until you decide the activity is over.

MATERIALS

Packs of cards (one pack for each group of four students)

GET READY

- ✓ Help the students divide into teams of four.
- ✓ Group each team of four against another team of four.
- ✓ Give each team a pack of cards.

INSTRUCTIONS

- ✓ Explain the following rules to the students:
Using a pack of regular playing cards, one team makes up a pattern at the beginning of the game, then lays out the cards in a row following the pattern. The other team tries to figure out what the pattern is as the row is being laid out. For instance, in an example too simple to use, the first team might lay the cards out in alternating colors—one red, then one black. Or the first team might lay them out alternating even and odd cards. Another example: 1,7,8,2,6,8,3,5,8,4,4,8. This pattern is $1+7=8$, $2+6=8$, $3+5=8$, $4+4=8$. (Aces count as 1 and jacks, queens, and kings as 11, 12, and 13.)
- ✓ Once one group has guessed correctly, they may lay the cards out in their pattern.

DISCUSSION QUESTIONS

- ★ *How did you figure out what the patterns were?* (The answers will possibly be something like, “I saw a little bit of a pattern, then I tried it on the rest of the cards and if it didn’t work, I tried another idea.”)
- ★ *Did it help you to figure out the pattern by having teammates?*
- ★ *How did it feel to figure out the patterns as a team?*
- ★ *Was it difficult to work together and create a pattern for the other team to guess? Why or why not?*
- ★ *When have there been other times that you had to work together with other people?*
- ★ *Why does it help to have groups of people cooperate and work together?*

This activity was developed with funding by the Intel Corporation. The game was invented by Robert Abbott and found in *Mathematics, A Human Endeavor* by Harold R. Jacobs.