

Q-dice

Dr. Spencer Kagan has many publications and workshops on effective cooperative learning and higher-level thinking engagement strategies. The backbone of this activity can be further researched by reading his materials on “higher-level thinking.”

Q-dice (questioning dice) are designed to prompt students (and teachers) to develop a full range of questions in order to review understanding of material. Students like it because it has elements of a game, it is random, and there is no right or wrong answer in creating the questions. Teachers like it because it encourages higher levels of thinking, develops cooperative learning skills, and highly engages students in the learning process.

Develop pairs of dice for each team.

It helps in managing the dice if you have the “journalist” die one color, and the “Bloom’s verbs” die a different color. Then, when you reach into the bag to get a pair for a team, your eye can just pick one of each color.

The first die should have the “journalist” questions on each face: Who, What, Where/When, Which, Why, How. If you want to leave one of these off, and have a “free” side, then students can have more opportunities to be creative in their questioning.

The second die should have the following verbs on each side. These follow Bloom’s taxonomy in levels of questioning, so as you go up in the list, you go from knowledge to evaluation on Bloom’s. Is, Did/Does, Can, Would, Will, Might. Again, if you want to leave one of these off, and have a “free” side, then students can have more opportunities to be creative in their questioning.

When a student rolls the dice, the combination of words they roll must be used in developing a question about the material. Their partner or team then must answer the question. Students can write each others’ questions and answers as a measure of accountability and for use in studying. Also, students can select the “best” question that the team came up with and share it with the whole class.

Examples of possible rolls and suitable questions:

What is albedo?

Where can heat radiate from?

Which....type of feedback....*would*.... produce equilibrium?

How might installing solar panels on every building in the world impact our climate?