Science is one of the oldest and most important academic subjects, covering a wide range of topics. It is also a key component in the acronym STEM, which stands for science, technology, engineering, and mathematics. Science help us in interpreting the world around us. From how trees reproduce to what an atom is composed of, everything we know about the universe is the result of scientific investigation and experiment. Throughout history, science has been a primary driver of human advancement. Science students have changed our modern world, from our understanding of gravity to cutting-edge medications.

According to studies, there are numerous advantages of playing games in the classroom. Teachers should strive to include at least one game per day in one of the main learning areas as a teaching and learning tool, assessment approach, or classroom incentive when organizing lessons. Students become more engaged in their learning, taught knowledge is reinforced, and class positivity rises as they play games.

In the classroom, playing games boosts overall motivation. Students are more motivated to learn, pay attention, and participate in prescribed tasks when they play games. Students can learn to work as part of a team and take responsibility for their own learning through games. They can also be used as a classroom management technique to assist encourage a group of students. The majority of games necessitate problem-solving tactics and forethought. Students can increase their mental cognition by using their working memory to solve problems in a game using a variety of methods. Using strategy in a game to stimulate the brain can be a fantastic brain workout!
1. Nature’s Bingo

Students take empty bingo papers outside. Allow children to watch nature and fill in the blanks with written or drawn descriptions of what they perceive.

The teacher may choose a specific area for pupils to focus on, such as birds, animals, ecosystem components, or tree varieties they’ve been studying, depending on the lesson. It could also be something they observe in nature. They trade sheets with another kid after their sheet is filled.

The game has begun! The teacher names out natural elements, and pupils check them off their sheets if they have them. The teacher can utilize this time before going on to the following item to engage pupils in a discussion about that issue.

2. Ecosystem Word Association

In groups of three, one student will mention something linked to nature that they perceive in their surroundings - "pond," for example.

In their group, a second student will say something related to that word. The second pupil might say "frog" because the first word was pond. This word does not need to be seen in their environment; it simply needs to be related to the prior word.

For one minute, students switch back and forth with word associations. The third student maintains time and scribes.

The group totals the points at the end of one minute. They receive one point for each word that is a component of the first word's environment. They also get a point for all the words they can see in their surroundings.

Let's say the terms pond, frog, green, algae, moss, tree, bark, owl, fly, bird, and eggs are on the group's list. They gain one point for each of the following words: frog, algae, moss,
tree, owl, and bird, which are all part of the local ecology. They also get a point for all of the terms they can see from their current location: pond, green, algae, moss, tree, bark, and bird. As a result, that group will receive a total of 13 points.

After the groups have completed their work, have them switch positions until everyone has served as the scribe at least once. Allowing students to repeat words after they've rotated adds an extra element of complexity.

This game can also be done indoors by showing slides of various settings from across the world — rainforests, deserts, deciduous woods, prairies, freshwater lakes, and so on — and having students conduct a word association with the many sorts of ecosystems.

3. Zoology Four Square

Even if you don't have the squares for Four Square painted on your blacktop, it's simple enough to draw one with chalk. It can be any size you like, but the most common size is a 10' by 10' square divided into four smaller squares.

To begin, four pupils stand in their own square facing each other and take turns bouncing/passing a ball. Two animals' names are shouted out by a student who is not in the Four Square. Whales and snakes, for example.

As the children bounce the ball back and forth, they take turns describing how the animals are similar. "They both wiggle to move about," "they don't have legs," "they breathe air," or "they swallow creatures’ whole" are some of the things students might remark.

Switch to listing their differences once they've exhausted all the ways they're same. "Whales can't survive on land," "snakes lay eggs," "snakes have teeth," and so on are some instances.
Switch who gets to play the Four Square game and start over with two new creatures when no more differences can be detected. Students who are waiting can act as fact checkers or provide additional perspectives on the answers.

You might wish to set a time restriction for older pupils in terms of how long they can take to come up with an answer. They are eliminated from the game if they do not respond within the time limit.

References:

https://www.plt.org/educator-tips/outdoor-science-games-elementary-middle-students


https://www.kaplanpathways.com/about/news/study-science-sciences-explained/