

Seed Concept Statements

1. All organisms have life cycles that include being born, developing into adults, reproducing themselves, and dying.
2. A seed is a matured ovule whose egg cells have been fertilized by sperm cells from pollen grains.
3. A fruit is a ripened ovary.
4. It is the part of the plant that contains the seed(s).
5. The seed can grow into a new plant of the same kind as the parent plants.
6. Seeds typically have three parts: a seed coat, stored food, and an embryo.
7. Most seeds have two seed coats, but some have only one.
8. The outer coat, which was the ovule, is usually thick and tough.
9. When the embryo begins to grow, it lives on the stored food until the leaves are able to make food for the plant.
10. Some seeds store their food in thick seed leaves, called cotyledons.
11. Cotyledons are part of the young plant, and may appear as seed leaves of the young plant.
12. Beans are dicotyledon plants, and have two cotyledons. Corn is an example of a monocotyledon, and has just one cotyledon.
13. The embryo is a tiny, young plant inside the seed that developed from the fertilized egg.
14. When mature the embryo has tiny roots, stem, and leaves that will develop into the new plant.
15. Seeds need water to grow.
16. Water makes a seed swell and softens its outer coat.
17. Seeds need the right temperature to grow. Most seeds grow best when the temperature ranges between 60-80°F.
18. Seeds need oxygen to grow.
19. Seeds need to be planted in loose soil and close to the surface so they can receive oxygen.
20. When a seed begins to grow we say that it is sprouting or germinating. First, the seed absorbs water. Water makes the seed swell and softens the seed coat. Then the embryo (tiny plant) inside the seed grows out through the seed coat.
21. In most seeds the roots are the first part to grow, and it grows downward.
22. The primary stem grows upward; then the tiny leaves unfold, forming the first true leaves of the plant. This is called a seedling.
23. Seedlings grow best when they are scattered away from the parent plant.
24. Many adaptations have occurred in the dispersal of seeds.
25. Some fruits scatter their own seeds. Example: Fruits that grow in pods (Peas & beans) twist when they ripen so the pods break open and scatter the seeds.
26. Many plants depend on the wind to scatter their seeds. Examples: Milkweed, cottonwood, dandelion)
27. Some seeds have wings that act like little propellers. (Example: maple, ash, elm, pine)
28. Some seeds are carried away by water. Example: coconut)
29. Birds and animals scatter seeds. Some seeds might stick to an animal's fur or feathers, or beaks and be dropped in another location. The seed may be passed through an animal as waste. An animal may store the food and forget where it has been stored.
30. Some seeds have thistles or burdocks that stick to the animals.
31. People disperse seeds: Seeds in mud stick to tires, seeds with thistles or burdocks stick to clothing, seeds are sold and can be planted in other locations.
32. Seeds are used for food, or used to create other products.