I'm not robot

The seed consists of several crucial components that contribute to plant growth and reproduction. A seed typically comprises the seed coat, embryo, endosperm, and sometimes perisperm. The seed coat provides protection while aiding in seed dispersal. The embryo is comprised of tissues giving rise to a new plant's root, stem, and leaves. The endosperm functions as a nutrient source for the developing embryo. Given article text here Seeds have two types based on whether they contain endosperm or not. Non-endospermous seeds, also known as Ex-Albuminous Seeds, develop a properly formed cotyledon and consume all the endosperm. These are found in dicot plants like Peas, Beans, Groundnuts, Mustard, but even in orchids that belong to monocots, they lack endosperm. Endospermous seeds, also known as Albuminous Seeds, contain some remaining endosperm that also supplies nourishment to the growing embryo along with the cotyledon. These are mostly found in monocot plants such as Maize, Wheat, Rice, Coconut, but even dicots like castor, sunflower, and Solanaceae family have them. Seeds have a hard seed coat protecting the embryo, aiding dispersal, and only germination relies on water completely. This makes seeds essential for finding water in plants during different stages of growth. As seeds are products of sexual reproduction, they provide genetic variation. Due to dormancy and dehydration, seeds can be transported and stored by farmers for future use. The main parts of a seed include the seed coat, embryo, endosperm, and perisperm. The plant shoot system undergoes significant development, with the growing tip of the epicotyl being the plumule. The hypocotyl serves as a transition zone between the rudimentary root and shoot, while the radicle is a small embryonic root. Cotyledons, specialized seed leaves that develop from the plumule, can occur singly in monocots or two in dicots. In most seeds, stored food is present in the form of carbohydrates, fats, and proteins, typically found in the endosperm, cotyledons, or perisperm. In some seeds, such as orchids, a functional storage tissue is lacking. The endosperm differs from other seed parts by having a triploid chromosome complement, resulting from the union of sperm nuclei with polar nuclei in the embryo sac. In cereals like corn, the endosperm represents the major bulk of the seed. In contrast, some seeds lack an endosperm, utilizing cotyledons as food storage instead. The endosperm can be described as mealy, horny, continuous, or ruminated, depending on its texture and structure. Seeds with stored food outside the embryo are albuminous, while those with stored food within the cotyledons are exalbuminous. The perisperm is a storage tissue originating from the nucellus, occurring in a few families such as Amaranthaceae, Chenopodiaceae, and Caryopyllaceae. The seed coat, developed from the outer covering of the ovule or integument, provides mechanical protection to the seed and prevents excessive water loss. The outer layer of a corn kernel, known as exocarp, serves as the visible part of the pericarp. The seed coat typically has two layers, with the outer testa being thicker and more delicate tegmen. External features like the micropyle and hilum can be seen in some seeds. The color of the hilum darkens when a seed matures, making it a reliable indicator of maturity. Seeds may appear smooth, wrinkled, or hairy on the outside. Some species, such as the castor bean, have unique characteristics like wart-like growths at the hilum.

3 main parts of a seed and their functions ppt. Parts of a seed and their functions grade 4. 3 parts of a seed and their functions. 3 main parts of a seed and their functions. Parts of a seed planter and their functions. Parts of a seed and their functions pdf. Parts of a seed and their functions worksheet. What are the three parts of a seed and their functions. Parts of a maize seed and their functions. Describe the three parts of a seed and their functions. What are the main parts of a seed and their functions. Parts of a seed and their functions for kids. Parts of a dicot seed and their functions. Parts of a seed and their functions ppt. Describe the parts of a seed and their functions.