

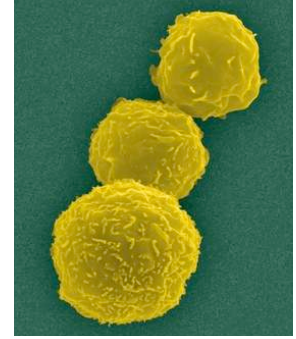
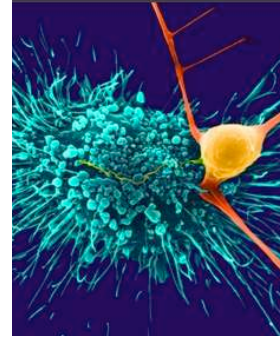
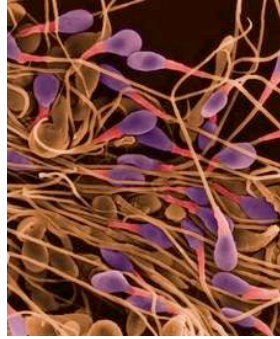
Name

Due

Biology



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A1.11

communicate ideas, using appropriate language and a variety of formats

A1.12

use appropriate graphic modes of representation

B3.3

explain the links between specialized cells, tissues, organs, and systems in plants and animals

B3.4

explain the primary functions of a variety of systems in animals

B3.5

explain the interaction of different systems within an organism and why such interactions are necessary for the organism's survival

The Corporate **Organism**

In this assignment, we will use the corporation as a **metaphor** to explain the **hierarchical organization** of an organism, and the characteristics of the **specialized cells** that make up the major types of **tissue**.

Organisms are organized **hierarchically**, just like corporations. Specialized cells are the workers of the organism. They are organized into tissues, which are like teams. Tissues form organs (departments) which are grouped into organ systems (divisions). Just as in a modern corporation, the same tissue can be part of many different organs, while an organ can be part of several organ systems.

Pretend you are the *Communications Officer* for *Organism, Inc*. Your job is to **describe the organization** of the corporation for the annual report, and to **recruit workers** to fill all the positions the corporation needs.

Annual Report

The structure of an organization is usually represented as a hierarchical chart, with boxes for departments and arrows and colours showing the relationship between departments, teams, and divisions. Some organization charts are very utilitarian, but those included in an annual report are both clear and attractive.

Your task is to create an **organization chart** for *Organism, Inc* for the annual report. It will be a full-colour two-page spread (11" × 17"). It should show as much detail as possible without being confusing. Naturally it must be correct!



Your chart should contain the following **organ systems**, and the **organs** and **tissues** that form them.

- digestive system
- respiratory system
- nervous system
- circulatory system

You should include *at least one more* organ system on your organization chart.

As well as the organization of the organism (for example, which organs are part of which systems), your chart should show the **interactions** between the various organs and systems.

Recruitment

Corporations need to recruit the right people to function properly. When advertising a position, a corporation will specify the skills and attributes they require, because they don't want to waste time interviewing people who can't do the job. They will also describe career prospects, because they want to attract the best people.

In this extended metaphor, you are recruiting skilled and motivated cells to join four different teams:

- epithelial tissue
- connective tissue
- muscle tissue
- nerve tissue

Your task is to create advertisements for these "tissue teams". Each advertisement will be a full-page colour magazine ad or a radio or TV spot.

Your ad should describe both the attributes of a successful candidate and entice the candidate with how important the job is by describing all the different careers (tissues and organs) that specialized cell could be part of.

For each "tissue team", describe the different **organs** and **organ systems** it is part of, as well as the names and characteristics of the **specialized cells** that make up the tissue.

metaphor

Metaphor is the concept of understanding one thing in terms of another. A metaphor is a figure of speech that constructs an analogy between two things or ideas, the analogy is conveyed by the use of a metaphorical word in place of some other word.