Plant Parts

Can you fill in the blanks with the correct words?

stem  flower  leaf  roots

Name: __________________________

Name __________________________
How Do They Help Out?

Each part of a plant has a different function. Each is very important in order for the plant to grow healthy and strong.

Try to match the plant parts with their functions.

- **Stem**: This part keeps the plant in the soil. It also collects moisture from the soil.
- **Leaves**: This part helps the plant stand up. It carries moisture and food to all parts of the plant.
- **Roots**: This part makes seeds so we can grow new plants.
- **Flowers**: This part makes food for the plant from the sun’s rays and carbon dioxide.
photosynthesis

A process by which a plant produces its food using energy from sunlight, carbon dioxide from the air, and water from the soil.
Flower Facts

Why Do Plants Have Flowers?

The goal of every plant and animal is the same: To create the next generation. The way a plant makes another generation of its species is by making seeds. Flowers are the tools that plants use to make their seeds.

A seed contains all the information needed to make a new plant. This information is stored as a code in tiny genes within the seed. This genetic code forces the seed to grow into a plant like its parents. Although the new plant will be the same species as its parents, it will not be exactly the same as either of them. Its genetic code is a new mix of genes, half from each parent.

Only flowers from the same species of plant can produce seeds. A flower provides a place to combine the genetic code from a male and a female into a single seed. The combination happens when the pollen, from the male parts of one flower, connects with an ovule (egg) from the female parts of another flower. This is called pollination.

Here are the basic parts of a flower:

But how does the pollen from one flower get to the ovules of another flower? Unlike animals, plants can't exactly go out hunting for a mate! Instead of working very hard at attracting each other, plants make flowers to attract pollinators to do the work of mating for them.

Pollinators can be bees, flies, beetles, moths, hummingbirds, bats and other animals that visit flowers. They gladly travel from flower to flower to gather the nectar and pollen to feed themselves or their young. The plants make the nectar and pollen just to attract the pollinators. Flowers are like big signs that advertise to pollinators: Eat Here!
When a pollinator goes into a flower to collect nectar or pollen, tiny grains of pollen from the **anthers** of the flower (the male parts) stick to their bodies. When the pollinator visits another flower of the same species, some of this pollen brushes onto the sticky **stigma**. The stigma is the receiving end of the **pistil** (the female part of a flower), where the **ovules** (eggs) in the **ovary** wait to be fertilized by the pollen. The pollen travels from the stigma, down the style, to the ovary. When an ovule is fertilized, the genes from the pollen combine with the genes of the ovule and a seed is made!

**POLLINATION**

1. The pollinator receives pollen from the **stamen** of the first flower.

2. And deposits it on the stigma of the next flower.

3. The pollen moves down the style to join with the ovules in the ovary.

This is how it happens:

The job of a flower is to help its pollinator put pollen exactly in the right place at the right time to make a seed. When a plant’s flower succeeds at this, the plant gets to pass the secret for this success to the next generation, through the genetic code in its seeds! When a plant fails to grow up and make seeds, its genetic code does not get passed on. It becomes a loser in the game of life.

The environment is constantly testing each plant. Competition for sunlight, water, nutrients and space is fierce. **Herbivores** are hungry and plants are their breakfast, lunch and dinner! Only the strongest individuals survive long enough to reproduce. These survivors keep making seeds, letting the environment select the winners and losers. Through this selection process plants have **evolved** (developed) to survive life in every habitat on our planet. This **evolution** has filled even the harshest habitats with life, including vernal pools.

Although the pollination of a flower may appear to happen by accident, plants and pollinators have been practicing for millions of years to make sure that this “accident” happens. Often a plant and pollinator co-evolve (evolve together), adapting to changes in each other to improve their own survival. A plant species may depend on a single species of pollinator to make its seeds. Likewise, many pollinators rely on one plant species to provide all the food for their young. The complex relationship between solitary bees and certain vernal pools plants is a good example of this co-evolution.
Flower Parts & Pollination Worksheet

Fill in the boxes with the name of the flower part from the words in the box below. Color the petals red, the sepals green, and the pollen yellow.

anther filament stem ovary petal sepal leaf style stigma twig

How Pollination Works

Fill in the blanks.

1. For plants to make seeds, the pollen from the anther of one flower needs to fertilize the ovule of another flower.

2. The seeds are produced in the flower’s ovary, at the base of the pistil.

3. A variety of critters collect pollen and nectar to feed themselves and their young. These critters also carry pollen from one flower to another and are called pollinators.

4. Name at least four critters that might be pollinators:
   - bees
   - butterflies
   - moths
   - bees
Photosynthesis

Green plants can make their own food by using the process of photosynthesis. Photosynthesis happens in a part of the leaf called the chloroplast. There are millions of chloroplasts in each leaf. The chloroplasts contain a special chemical called chlorophyll. Chlorophyll is green and gives green plants their color.

Chlorophyll is very special because it can trap the light energy that plant leaves get from the sun. Here is how photosynthesis works. The chloroplasts within the leaves take in carbon dioxide (CO₂) from the air, water (H₂O) from the soil (that travels from the roots to the stems to the leaves), and light* energy from the sun. The CO₂, H₂O and light energy are put together** to make glucose. Glucose is a type of sugar. It is made of carbon (C), hydrogen (H), and oxygen (O) and has lots of chemical energy stored within it. When the CO₂ and H₂O combine to make glucose there is extra oxygen left over. This extra oxygen is released as O₂ into the air. This is the oxygen that we breathe!

Photosynthesis is very important for many reasons. The energy the plants capture from the sun is used by the plants to help them grow. Also, animals depend on this energy as their source of energy too. This is because animals eat plants or eat other animals that ate plants. In addition, plants and animals share another important relationship. Plants take in CO₂ from the air and release O₂ back into the air. Animals (including humans) take in O₂ and release CO₂. Therefore, plants and animals depend on each other.

Photosynthesis Homework:

1. Photosynthesis is the process of converting [light] energy into [chemical] energy.

2. Photosynthesis is made possible by the green pigment called chlorophyll.

3. To perform photosynthesis plants need [water] from the soil, [light] from the sun, and [CO₂] from the air.

4. The products of photosynthesis are [H₂O] and [glucose].

5. Light energy for photosynthesis usually comes from the sun.

6. The part of the plant cell where photosynthesis takes place is called the chloroplast.

7. Glucose is a type of sugar. It is made of C, H, and O. It has lots of chemical energy stored within it.

*photo means "light"

**synthesis means "put together"
Bees and butterflies and bugs on moths can go and get the pollen from the anther and as they go from one plant to the other plant and some of the pollen on their hairs rubs on the stigma and to the ovary and the eggs are made and that is how it works.
Chapter 8. Teambuilding

My Favorites!

Sport to Play: Basketball
Sport to Watch: Basketball
Hobby: Reading
Holiday: Christmas
Place to Be: Mall
Time of the Day: 7:00
Season: Winter
Flower: Rose
Tree: Oak
Song: Grill
Group: Franchise Boys
Book: Bud not buddy
Movie: You got served
TV Program: Everybody hates Chris

School Subject: Science
Color to Wear: Black
Type of Clothing: Bed
Person to Visit: Grandma
Dream Car: 
Dream Career: Doctor
Dream Vacation: Paris
Dream Future: 
Food: Hot wings
Drink: Dr. Pepper
Candy Bar: Crunch
Author: 
Animal: Lion
Some of the differences of Kenya and Ghana are the life expectancy the life expectancy for the average male in Ghana is 55.36 and female is 51.22 on the other hand the life expectancy in Kenya for the average male is 44.79 and for the female is 45.1. The arable land in Kenya is 8.08 and the arable land in Ghana is 16.26. The total population of Ghana is 20,757,032 and the population of Kenya is 32,021,856.
Name: Roddick Williams

Use www.worldfactbook.com search engine to answer the following questions

UNITED STATES OF AMERICA

Life expectancy: Male 74.63 yrs Female 80.36 yrs
Highways paved 414,8345 km Unpaved 2,251,902 km

Number of tractors: _________

Arable land: 19.13 %

The climate of this country:
Temperature range:
Low ________ High _________

Rainfall (determine inches or mm):
Low ________ High _________

Terrain- types of land and soil: vast, central, plain, mountains

Agricultural products – what people eat and grow: wheat, corn, beef, pork, poultry, vegetables, cotton, fruits, dairy products

Total population 2004 year 293,027,571

Labor force by occupation:
Year 2004 Agricultural 0.7 %
Year 2004 Services 16.3 %
Year 2004 Industry 83.1 %

Literacy rate
Male 47 % Female 97 % year 1990

(Amoako/Narishkin 2005)
Name: Roddick Williams

Use www.worldfactbook.com search engine to answer the following questions

Ghana

Life expectancy: Male 55.36 yrs Female 57.22 yrs

Highways paved 11,665 km Unpaved 27,744 km

Number of tractors: __________

Arable land: 16.26 %

The climate of this country:

Temperature range:
Low __________ High __________

Rainfall (determine inches or mm):
Low __________ High __________

Terrain - types of land and soil: mostly low with dissected plateau is south-
central area

Agricultural products – what people eat and grow: cocoa, rice, coffee, cotton

Tropical, peanuts, corn, sheanuts, timber, bananas

Total population 20,751,030 year 2004

Labor force by occupation:
Year 1999 Agricultural 60 %
Year 1994 Services 15 %
Year 1994 Industry 25 %

Literacy rate
Male 82.7% Female 67.1% year 2003

(Asoko/Narshichin 2005)
Chapter 8. Teambuilding

I Am

Instructions: Mark line closest to the word that best describes you.

Fast ← Fastest
    Slow
Thinker ← Thinker
    Doer
Morning Person ← Morning Person
    Night Person
Listener ← Listener
    Talker
Leader ← Leader
    Follower
Indoor Person ← Indoor Person
    Outdoor Person

I Prefer:

Instructions: Mark line closest to the word that best describes you.

Adventure Movie ← Adventure Movie
    Comedy
Ice Cream ← Ice Cream
    Cake
Airplanes ← Airplanes
    Boats
Sports Car ← Sports Car
    Luxury Car
Beach ← Beach
    Mountains
Dogs ← Dogs
    Cats
## How I Respond to Conflicts

Fill in the appropriate circle for things you always, sometimes, or never do.

<table>
<thead>
<tr>
<th>When there's a conflict, I try to:</th>
<th>Always</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. hit the other person</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. run away</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. get help from another kid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. talk it out</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. ignore it</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. understand the other point of view</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. make a joke of it</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. get help from a grown-up</td>
<td></td>
<td><strong>X</strong></td>
<td></td>
</tr>
<tr>
<td>9. make the other kid apologize</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. apologize myself</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. find out what the problem is</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. listen to the other kid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. tell the kid to leave me alone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. say swear words</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. get friends to gang up on the other kid</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*From Creative Conflict Resolution, copyright © 1984 William J. Kreidler, published by Scott, Foresman and Company.*
The United Nations

Name: Richard W.

In what year was the UN established?
1945

How many countries are members?
191

If the United Nations is not a world government, what is it? Or what do they do?
It provides the means to help resolve international conflicts.

Where is the United Nations building?
New York

What are the six main organs of the UN?
- General Assembly
- Security Council
- Economic and Social Council
- Trusteeship Council
- International Court

What is the General Assembly?
Parliament of Nations

(Anoah & Narishkin 2006)
The UN uses not laws but it does use makes the world better by helping all the countries out.

Each member has one vote on to decide whether to help bully and help the country or not.

15 council members to help decide whether to help keep world peace and security.

Their coordinates the economic and social work of the UN.

The person who carries out all responsibility of the UN.
The United Nations system

Principal Organs

Trusteeship Council
Security Council
General Assembly
Economic and Social Council
International Court of Justice
Secretariat

Subsidiary Bodies
Military Staff Committee
Standing Committee and ad hoc bodies
International Criminal Tribunal for the Former Yugoslavia
International Criminal Tribunal for Rwanda
UN Monitoring, Verification and Inspection Commission (Iraq)
United Nations Compensation Commission
Peacemaking Operations and Missions

Programmes and Funds
UNCTAD United Nations Conference on Trade and Development
ITC International Trade Centre (UNCTAD/ITC)
UNDCP United Nations Drug Control Programme
UNEP United Nations Environment Programme
UNICEF United Nations Children’s Fund

UNDP United Nations Development Programme
UNIFEM United Nations Development Fund for Women
UNV United Nations Volunteers
UNCDF United Nations Capital Development Fund
UNFPA United Nations Population Fund
UNHCR Office of the United Nations High Commissioner for Refugees
WFP World Food Programme
UNRWA United Nations Relief and Works Agency for Palestine Refugees in the Near East
UN-HABITAT United Nations Human Settlements Programme (UN-Habitat)

Research and Training Institutes
UNICRI United Nations International Crime and Justice Research Institute
UNITAR United Nations Institute for Training and Research
UNRISD United Nations Research Institute for Social Development
UNISDR United Nations Institute for Disaster Reduction
UNIAP United Nations Institute for Training and Research

UNRISD United Nations Research Institute for Social Development
UNISDR United Nations Institute for Disaster Reduction
UNIAP United Nations Institute for Training and Research

Other UN Entities
OHCHR Office of the United Nations High Commissioner for Human Rights
UNOPS United Nations Office for Project Services
UNU United Nations University
UNSSC United Nations System Staff College
UNAIDS Joint United Nations Programme on HIV/AIDS

Functional Commissions
Commissions on:
Human Rights
Narcotic Drugs
Crime Prevention and Criminal Justice
Science and Technology for Development
Sustainable Development
Status of Women
Population and Development
Commission for Social Development
Commission on the Status of Women
Commission for passes

Regional Commissions
Economic Commission for Africa (ECA)
Economic Commission for Europe (ECE)
Economic Commission for Latin America and the Caribbean (ECLAC)
Economic and Social Commission for Asia and the Pacific (ESCAP)
Economic and Social Commission for Western Asia (ESCWA)

Other Bodies
Permanent Forum on Indigenous Issues (PFII)
United Nations Forum on Forests
Sessional and standing committees
Extradition and related bodies

Related Organizations
WTO World Trade Organization
IAEA International Atomic Energy Agency
CTBTO Preparatory Commission
PrepCom for the Non-Proliferation Treaty
OPCW Organization for the Prohibition of Chemical Weapons

Specialized Agencies
ILC International Labour Organization
FAO Food and Agriculture Organization of the United Nations
UNESCO United Nations Educational, Scientific and Cultural Organization
WHO World Health Organization
UNICEF United Nations Children’s Fund

World Bank Group
IBRD International Bank for Reconstruction and Development
IDA International Development Association
IFC International Finance Corporation
MIGA Multilateral Investment Guarantee Agency
ICSID International Centre for the Settlement of Investment Disputes

IMF International Monetary Fund
ICAO International Civil Aviation Organization
IMO International Maritime Organization
ITU International Telecommunication Union
UPU Universal Postal Union
WMO World Meteorological Organization

UNICEF United Nations Children’s Fund
UNAIDS Joint United Nations Programme on HIV/AIDS
UNOPS United Nations Office for Project Services
UNU United Nations University
UNSSC United Nations System Staff College

Notes: Solid lines from a Principal Organ indicate a direct reporting relationship; dashed lines indicate a non-subordinate relationship. The UN Drug Control Programme is part of the UN Office on Drugs and Crime; UNRWA and UNIDIR report only to the GA. The World Trade Organization and World Tourism Organization use the same acronym. IAEA reports to the Security Council and the General Assembly (GA). The CTBTO PrepCom and OPCW report to the GA. Specialized agencies are autonomous organizations working with the UN and each other through the coordinating machinery of the ECOSOC at the intergovernmental level, and through the Chief Executive Board for coordination (CEB) at the inter-secretarial level.