

# Warm Up (10/3-10/4)

**\*\*Take out your HW to be stamped\*\***

1. Take out your laptop and 8.2 notes
2. Log in to Google Classroom
3. Wait for me to post the quick quiz

# Agenda

- Warm up- 8.2 Quick Quiz
- Grade HW
- 8.3 Notes: Control of the Cell Cycle
- Ch 8 Quizlet Live
- Lab: Stop-Motion Mitosis Animation Lab

**Homework: Ch 8 Study Guide**

**(Due Mon/Tues)**

**Ch 8 Quiz Mon/Tues**

## Section Assessment

### Understanding Main Ideas

1. Describe how a cell's surface area-to-volume ratio limits its size.
2. Why is it necessary for a cell's chromosomes to be distributed to its daughter cells in such a precise manner?
3. Relate cells to each level of organization in a multicellular organism.
4. In multicellular organisms, describe two cellular specializations that result from mitosis.

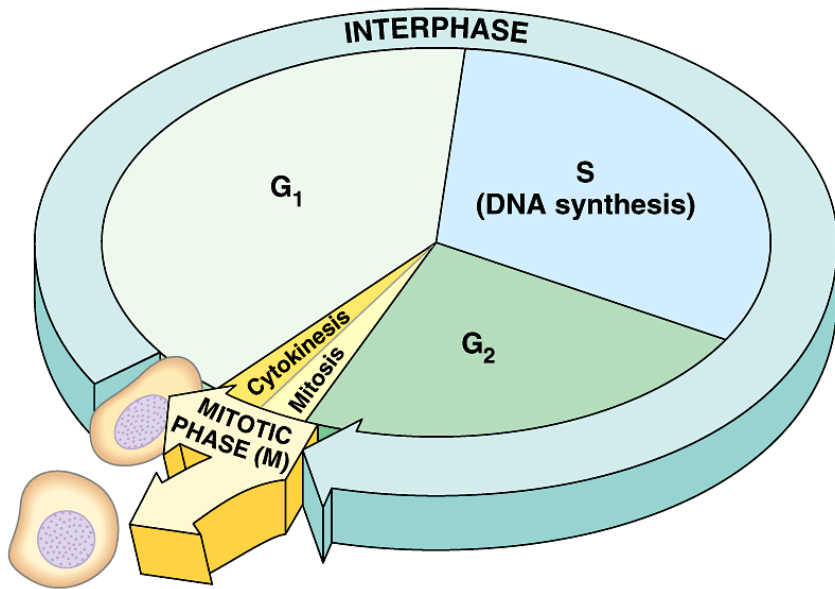
### Thinking Critically

5. At one time, interphase was referred to as the resting phase of the cell cycle. Why do you think this description is no longer used?

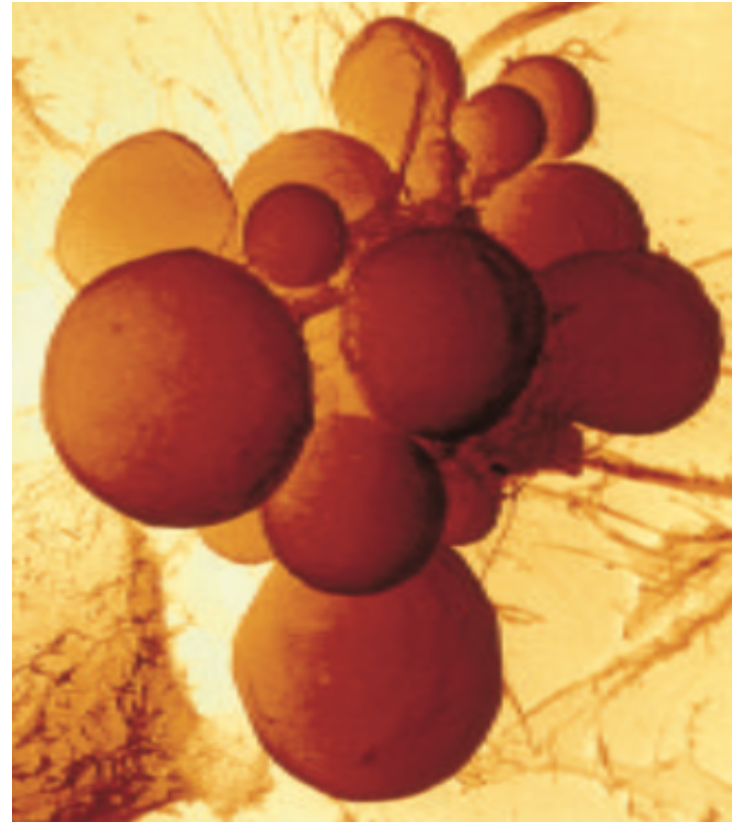
### Skill Review

6. **Get the Big Picture** Make a table sequencing the phases of the cell cycle. Mention one important event that occurs at each phase. For more help, refer to *Get the Big Picture* in the **Skill Handbook**.

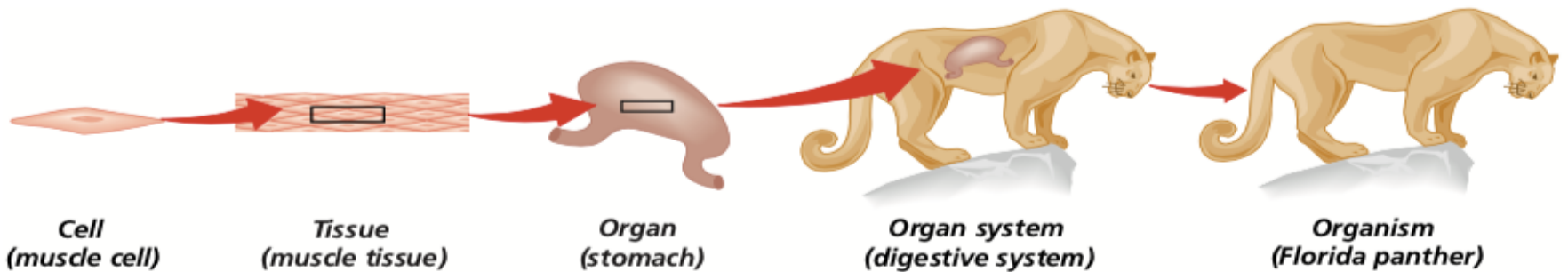
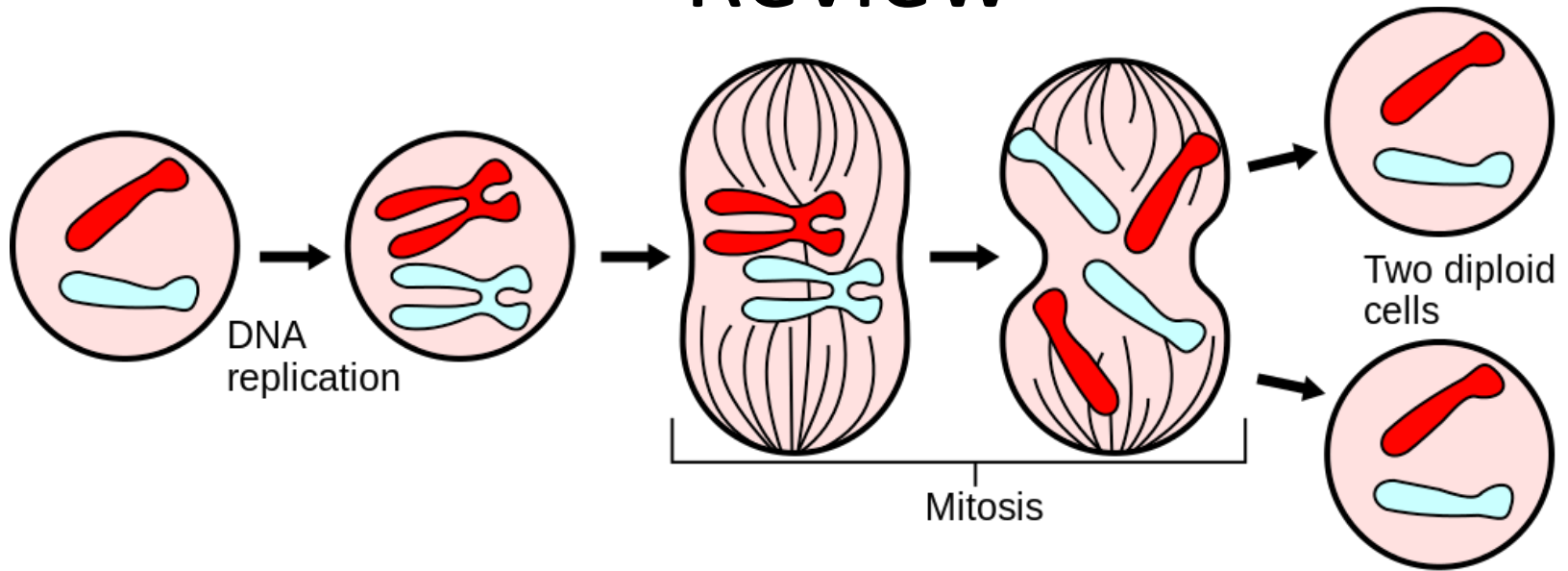
# 8.3: Control of the Cell Cycle



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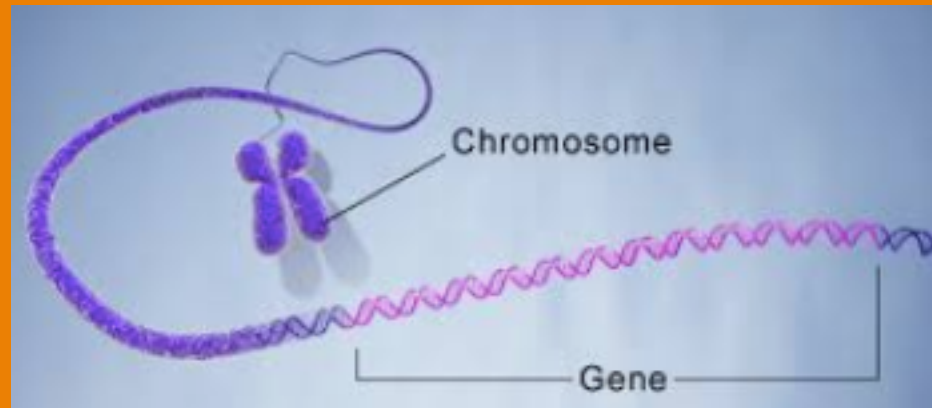


# Review



# What controls the cell cycle?

- Proteins and enzymes
  - Gene: Segment of DNA that controls the production of proteins

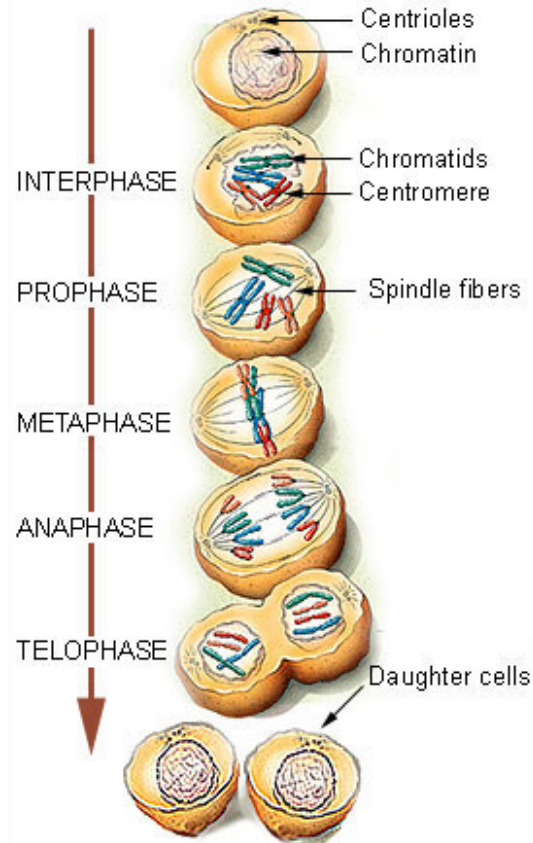


What happens if a cell loses control of the cell cycle?



# Checkpoints

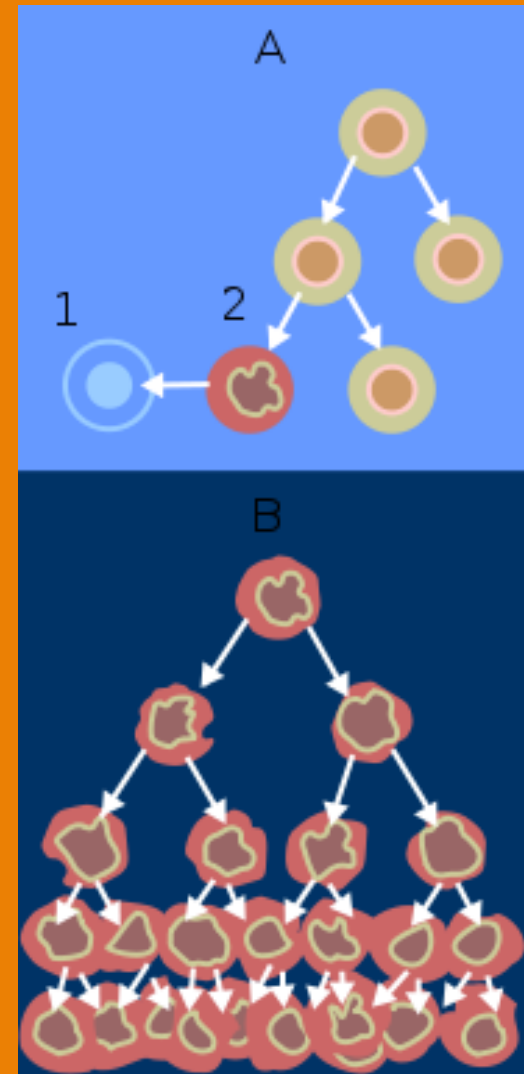
## Mitosis



- Mitosis will not start/continue unless conditions in the cell are good
- Are conditions favorable?
- Are there mistakes in synthesized DNA?
- Are chromosomes attached to fibers correctly?

# Cancer



- Uncontrolled, unregulated cell division
- Damage to DNA results in a mass of defective cells called a tumor
- Research suggests that cancer is a result of genetic and environmental factors.
  - Carcinogens: UV radiation, viruses, tobacco, etc





# 2017 Cancer Statistics

## Estimated New Cases

			Males	Females			
Prostate	161,360	19%			Breast	252,710	30%
Lung & bronchus	116,990	14%			Lung & bronchus	105,510	12%
Colon & rectum	71,420	9%			Colon & rectum	64,010	8%
Urinary bladder	60,490	7%			Uterine corpus	61,380	7%
Melanoma of the skin	52,170	6%			Thyroid	42,470	5%
Kidney & renal pelvis	40,610	5%			Melanoma of the skin	34,940	4%
Non-Hodgkin lymphoma	40,080	5%			Non-Hodgkin lymphoma	32,160	4%
Leukemia	36,290	4%			Leukemia	25,840	3%
Oral cavity & pharynx	35,720	4%			Pancreas	25,700	3%
Liver & intrahepatic bile duct	29,200	3%			Kidney & renal pelvis	23,380	3%
<b>All Sites</b>	<b>836,150</b>	<b>100%</b>	<b>All Sites</b>	<b>852,630</b>	<b>100%</b>		