

Genetic Disorder

UNwanted Fugitive Poster (Prezi)

What is it?

Each student (group) will select one disorder from the list, research information on the disorder, and prepare and deliver a comprehensive, concise, and complete oral presentation to the class. Each presentation must be at least FOUR minutes and not more than SEVEN minutes in length. A time for questioning will follow each presentation. Since you are expected to be an expert on the disorder you choose, you must deliver your talk WITHOUT reading it. You will be given index cards on which you may jot down a few TOPICS (not facts). The index cards will be turned in as soon as your talk is over. Prezi.com will be used to create your presentation. Only _____ class days will be used to work on research and presentation.

Research paper Due Date is: _____

Include the following information:

Presentation Dates: _____

1. **UN-Wanted:** Name of disease (scientific) Name of Disease Chosen _____
2. **Also Known As:** The disorder's other names name (common names)
3. **Last known Loci:** Location on which chromosome (If known)
4. **Vital Statistics:**
 - a. Description of the type of mutation
5. **Wanted For:** Major effect(s) of the disease
 - a. Description of how the mutant gene causes the affliction
6. **Treatment (if any)**
7. **Detection-** How do they find out about the person has the disorder
8. **Brief history of the disease**
 - a. Include populations that have higher than average frequencies of the disorder. A true life story or short 2min or less video clip
9. **If the parents in GATTACA were going to have a child with this disorder, would they choose to remove this in the beginning? Why? What are the Distinguishing Characteristics: Symptoms of the disease?**
10. **3-5 Interesting Facts**
11. **Include- Definitions of Transcription, Translation, Replication, Mutation-** Was there an error in any of these processes that caused the disorder.
12. **Add pictures and 2min or less video clips as necessary**
13. **Create Kahoot with topics 1-11 (11 questions- 1 from each topic)**
14. **Create Kahoot with 9 or 10 questions using _____ topic from this 9 weeks.**

Example:

Cystic Fibrosis

Symptoms

Mucus, wheezing & recurrent respiratory infections. Frequent sinus infections. Salty sweat. About 15% of babies born with cystic fibrosis are also born with meconium ileus, which is fatal if not treated. Infants and small children.

Detection of Carriers

Cystic Fibrosis Foundation sweat test. Cystic fibrosis mutation. Tests. Web site: <http://www.cff.org/clinical/testing/sweat/>

The most common test for cystic fibrosis is the sweat test. People with cystic fibrosis often have 85 to 90% more salt in their sweat.

Treatment

The most well known cure for cystic fibrosis is antibiotics and medication to dilate air passages. Chest physiotherapy is another

Inheritance

Cystic fibrosis is a recessive disorder, this means that it is only inherited if the person gets the one mutated gene from each parent.

Interesting Facts

About 2,500 babies are born with cystic fibrosis each year in the U.S. About 10 million Americans carry the gene.

Picture of the Chromosome

Chromosome 7

Exact Name of Gene

Cystic fibrosis transmembrane conductance regulator or CFTR.

For more information take a look at these other websites:

Cystic Fibrosis Foundation. www.cff.org

More information

YOUR DISORDER WILL BE SELECTED FROM THE LIST BELOW- Circle the disease your group decided to present about

1. Sickle-Cell Anemia
2. BRCA1 ad BRCA2 Breast cancer
3. Thalassemia
4. Edward's Syndrome/Patau's Syndrome
5. Turner's Syndrome
6. Polycystic kidney disease
7. Klinefelter's Syndrome
8. G6PD (Glucose 6 phosphate dehydrogenase) Deficiency
9. Cooley's anemia
10. Gaucher's disease
11. Hemophilia
12. albinism
13. Familial Hypercholesterolemia
14. diabetes mellitus
15. Neurofibromatosis
16. diabetes insipidus
17. Marfan Syndrome
18. fragile X syndrome
19. Phenylketonuria(PKU)
20. Parkinson's disease
21. Cystic Fibrosis
22. Alzheimers
23. Tay Sachs Disease
24. colorblindness
25. Down Syndrome
26. epidermolysis
27. Duchenne Muscular Dystrophy
28. Hurler Disease
29. Huntington's Disease
30. Burkitt lymphoma
31. Cri-du-chat Syndrome
32. Pituitary dwarfism syndrome
33. Galactosemia
34. Immune deficiency diseases (Boy in the bubble)
35. left Lip/Palate
36. Polydactyl
37. Osteogenesis Imperfecta
38. Sensorineural deafness
39. Spina Bifida/Anencephaly
40. Edward Syndrome (Trisomy 18)
41. Jacob Syndrome (XXY)
42. Prader-Willi Syndrome
43. Hirschsprung Disease
44. Incontenentia Pigmenti
45. Menke's Disease
46. Lesch-Nyhan Syndrome
47. Hydrocephalus
48. Malignant Hyperthermia
49. Osteogenesis Imperfecta
50. Waardenburg Syndrome
51. Infantile Bilateral Striated Necroses
52. Myoclonic Epilepsy
53. Omithine Transcarbamylyase Deficiency
54. Mitochondrial Encephalomyopathy
55. Monsomy 21
56. Angelman Syndrome
57. Cat-eye Syndrome
58. Hunter Syndrome
59. Lissencephaly
60. Greig Syndrome
61. Tourette's Syndrome
62. Jumping Frenchman of Maine Syndrome
63. Carr-Barr -Plunkett Syndrome
64. Kesaree-Wooley Syndrome
65. Barr-Shaver-Carr Syndrome
66. Wilson Disease
67. Porphyria
68. Maple Syrup Urine Disease
69. Homocystinuria
70. Galactosemia

9 weeks topics Options

circle the **one your group chooses**

1. Chromosomes
 2. Pedigrees
 3. Punnett Squares
 4. Artificial Selection
 5. Characteristics of Life
 6. DNA
 7. Other with teacher's approval.
-

How will this activity be graded? The following factors will be used to determine the grade:

1. The following criteria will be a group grade

- a. Having all of the information from research on topic for your presentation
- b. Having correct questions with correct answers on Kahoot quiz. (10 from _____ unwanted disease, 10 questions as review of _____ topic from this 9 weeks.

2. The following criteria will be an individual grade.

- 1. Completion of your own Research paper.
- 2. Accuracy - How accurate was your presentation? Did you appear to know the information well? Did you answer questions accurately? Did you make the effort to insure that all terms were pronounced correctly?
- 3. Following directions - Did you stick to the time limits? Did you make your note card and use it properly? Did you include all the required information?
- 4. Delivery - Did you speak loudly and clearly? Were you too fast or too slow? Did you appear confident and poised? Did you have proper eye contact with the class? Were you enthusiastic? Did you avoid silliness?
- 5. Use of visual aids - Did you use the board/overhead well? Prezi presentation? Did you use any other visual aids such as pictures, charts, objects, demonstrations, handouts, etc.

What must be included in the presentation?

The presentation should follow the outline below. The questions listed are designed to provoke thought and to help you determine what is significant and what is not. They are not to be answered individually as a question and answer session.

TIP: Use the Bold words on the first page when explaining the information in your presentation. That way you and the teacher grading can easily make sure you have all the required information.

Kahoot questions 1-20 Rubric																				
Title with disease / 9weeks topic-5 Points possible															Points earned-					
Cover photo- 5 points possible															Points earned-					
Rating by peers- 5 points possible															Points earned-					
															Total-					
(+) means 2 points (-) means 0 points																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Good question																				
Picture																				
20 sec. timer																				
4 answer choices																				
True/False (only 2)																				
On topic?																				
Correct or wrong answer selected.																				
Total																				
																		Kahoot Total		/ 260

Name of Disease _____

9 weeks topic _____

Name _____

Name _____

Name _____

Name _____

Name _____

Hour _____

Disease Wanted Poster (Prezi) Grading Rubric (official use)

		0 points	5 points	10 points
Wanted	<input type="checkbox"/>	Incorrect or Missing	Is Missing a Major Name	Correctly Identified
Also Known as	<input type="checkbox"/>	Incorrect or Missing	Is Missing a Major Name	Correctly Identified (1-3)
Last known Loci	<input type="checkbox"/>	Incorrect or Missing	Not enough information (No image)	Well explained with a picture
Vital Statistics	<input type="checkbox"/>	Incorrect or Missing	Not enough information	Well explained
Wanted For	<input type="checkbox"/>	Incorrect or Missing	Not enough information	Well explained
Treatment	<input type="checkbox"/>	Incorrect or Missing	Not enough information	Well explained
Detection	<input type="checkbox"/>	Incorrect or Missing	Not enough information	Well explained
Brief history	<input type="checkbox"/>	Incorrect or Missing	Not enough information (no image or video)	Well explained with images or short video
GATTACA	<input type="checkbox"/>	Incorrect or Missing	Not enough information	Well explained
<input type="checkbox"/> 3-5 Interesting Facts		Incorrect or Missing	Only 1-2 facts	3-5 facts given
Definitions -Explanation	<input type="checkbox"/>	Incorrect or Missing	Only 1-2 definitions or no or limited explanation	All 3 definitions given with correct explanation
Use Visual Aids	<input type="checkbox"/>	Looked sloppy or rushed	Did OK	Excellent Job!!
Total				

Individual Presentation Points

Accuracy	Did not know information. Read from board <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Limited knowledge. Glanced back many times <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Knew their information. Talked to class <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Following Directions	Too long or Short and did not use cards in a helpful way <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Right time limit /bad use of cards <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Correct use of cards and time constraints <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Delivery	Could not hear or understand <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Did OK <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Excellent Job! <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Presentation Total 160pts possible			

Project Date is: _____

Research Paper

Name _____ Date _____ Hour _____

Due Date _____
This is an individual Grade

Include the following information: Name of Disease Chosen _____
If more room is needed write on a separate paper and attach to this paper.

1. UN-Wanted: Name of disease (scientific) _____

Kahoot Question: _____

Answer: _____

2. Also Known As: The disorder's other names name (common names) (if none write none) (if more than 6 only list 6)

_____, _____, _____
_____, _____, _____

Kahoot Question: _____

Answer: _____

3. Last known Loci: Location on which chromosome (If known)- Add picture to presentation

Kahoot Question: _____

Answer: _____

4. Vital Statistics: (images if possible) Not to graphic...

All genetic disorders are inherited. There are several different ways in which they can be inherited. Determine whether your disorder is an autosomal dominant trait, an autosomal recessive trait, an X-linked recessive trait, a chromosomal error or a multifactorial trait (polygenic disorder). Chromosomal errors may take several types: a particular missing chromosome (e.g. a missing X chromosome), an extra chromosome (e.g. an extra chromosome 21), or a damaged chromosome (e.g. part of a chromosome deleted). A multifactorial disorder is one which is caused by several genes or by a combination of genetic and environmental factors.

Kahoot Question: _____

Answer: _____

5. Wanted For: Major effect(s) of the disease (**images if possible**) **Not to graphic...**

Description of how the mutant gene causes the affliction- use the vocab. Words

What are the features of the disorder? How does it affect the victim? What is it like to have the disorder? How would you describe the disorder to someone else? What is the disorder like externally, internally, biochemically, psychologically, etc. What problems are associated with the disorder? Is the disorder physically limiting? Is it life-threatening? Is it invariably fatal? Is it found more commonly in certain groups of people, such as a particular ethnic or religious group or particular sex?

Kahoot Question: _____

Answer: _____

6. Treatment (if any) (or explain why there is no treatment)

Can anything be done for the disorder? Can the basic defect be treated? Can the symptoms or results of the disorder be treated? Is there a cure for the disorder? Is there any gene therapy for the disorder?

Kahoot Question: _____

Answer: _____

7. Detection- How do they find out about the person has the disorder

Can the disorder be detected before its symptoms appear? If so, how? Can it be detected prenatally? If so, how? Is there any way to detect a carrier of the disorder? If so, how?

Kahoot Question: _____

Answer: _____

8. Brief history of the disease

Include populations that have higher than average frequencies of the disorder. A true life story or short 2min or less video clip if necessary Brief history of the disease or detection of the disease and the importance of why it has been passed down. Give a real life story of someone affected with your disorder.

Kahoot Question: _____

Answer: _____

9. If the parents in GATTACA were going to have a child with this disorder, would they choose to remove this in the beginning? Why? What are the Distinguishing Characteristics: Symptoms of the disease?

Kahoot Question: _____

Answer: _____

10. 3-5 Interesting Facts

1. _____

2. _____

3. _____

Kahoot Question: _____

Answer: _____

11. Include- Definitions and pictures of Transcription, Translation, Replication, Mutation-

Transcription _____

Translation _____

Mutation _____

Replication _____

Was there an error in any of these processes that caused the disorder?

Kahoot Question: _____
Answer: _____

12. Did find any pictures and/or videos to add ? YES NO

Disease Research Websites- You may NOT use Wikipedia to search for information. . you should use the following sites

Kids Health
www.kidshealth.org

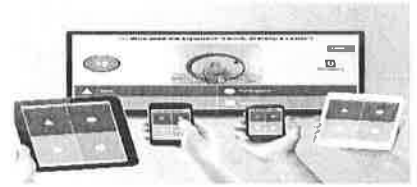
Center for Disease Control
www.cdc.gov

SC Virtual Library
www.scdiscus.org

Site your sources:



Rules for creating a Kahoot (individual)



1. Go to getkahoot.com and create an account
2. Use one of your Moore students email account
3. Use this password- Student7
4. Select Create a quiz (only)
5. Put in a cover picture
6. Each question will have a 20sec time limit.
7. A picture needs to be added to each question. (school appropriate and goes with questions)
8. Only 2 true false questions are allowed
9. Questions should be challenging and answerable
10. Only 1 option can be obvious as incorrect

First 11 questions are about your unwanted disease (see research papers for options)

Next 9 questions are questions from this 9 weeks on the topic of _____

Write down 5 possible questions from the given topic

Each question has to be from the readings, worksheets, textbook or a source you cite:

1. Possible Kahoot Question: _____

Answer: _____

2. Possible Kahoot Question: _____

Answer: _____

3. Possible Kahoot Question: _____

Answer: _____

4. Possible Kahoot Question: _____

Answer: _____

5. Possible Kahoot Question: _____

Answer: _____