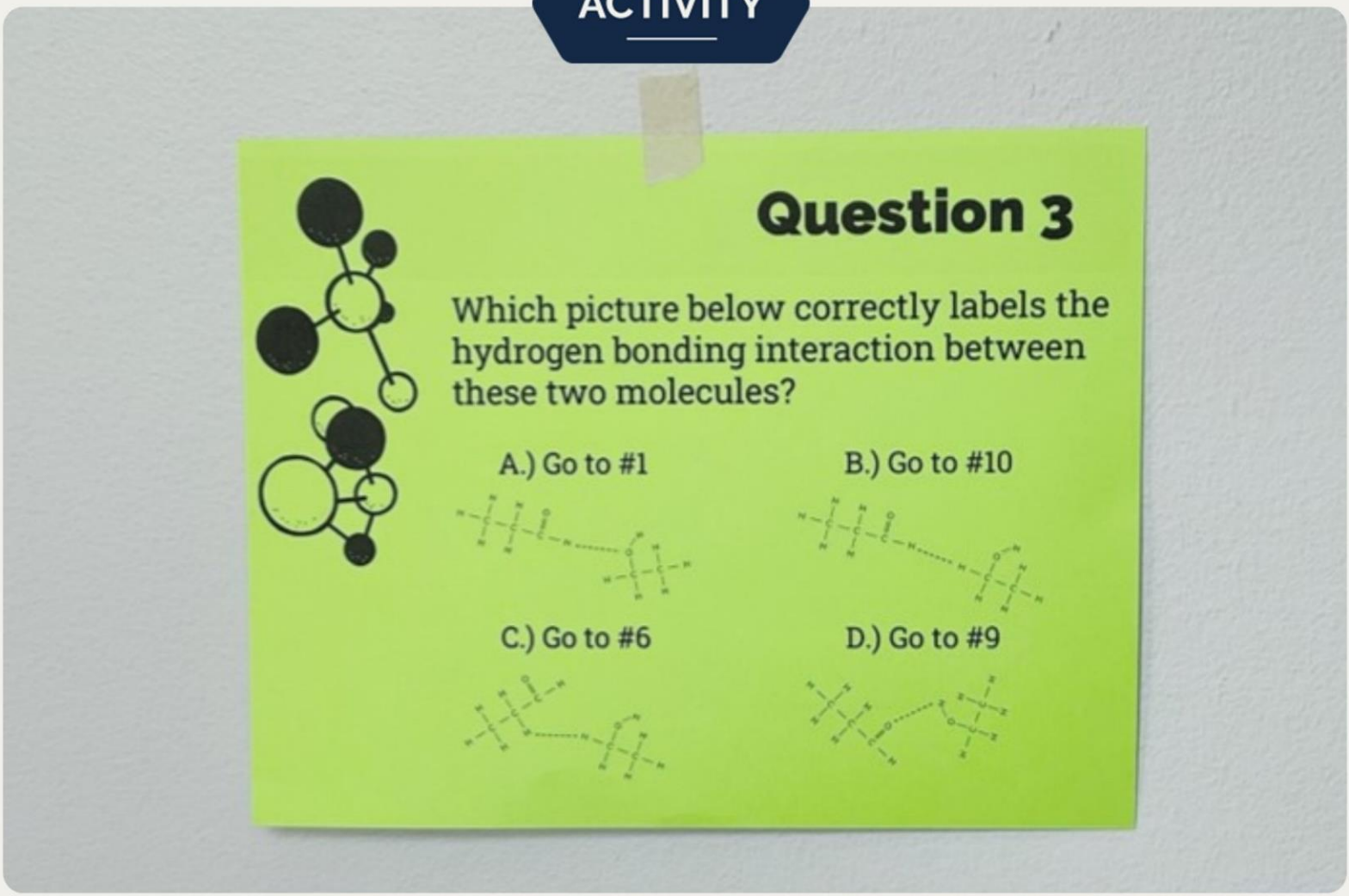
Thank you for your download!

IMFs and the H-Bond Question Trail

ACTIVITY

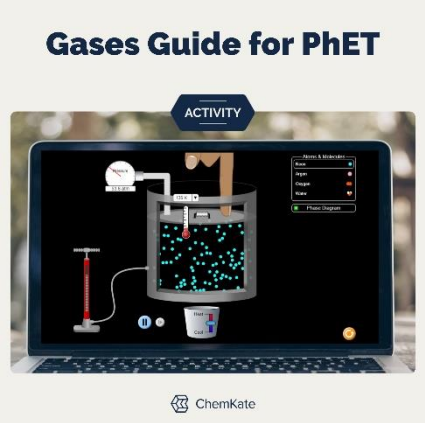


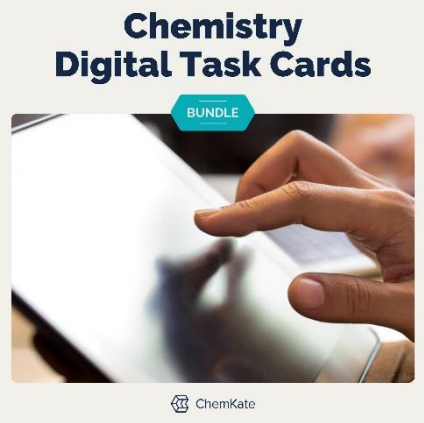
ChemKate

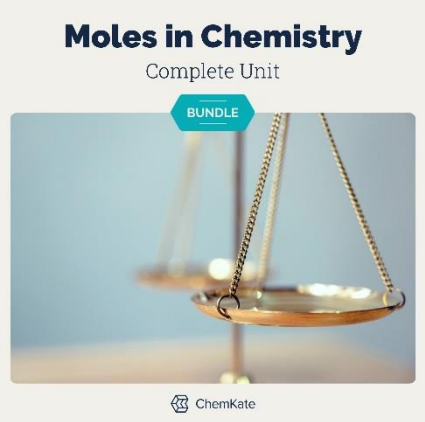
I'd love your feedback!

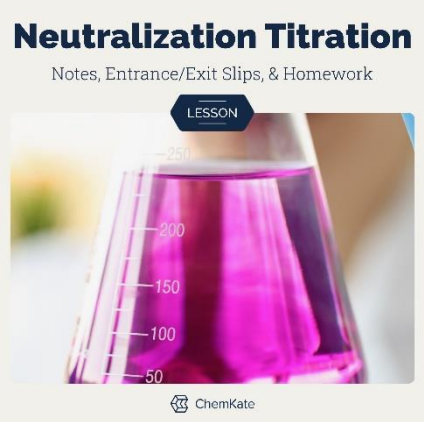
Intermolecular Forces Review Question Trail – Print & Digital

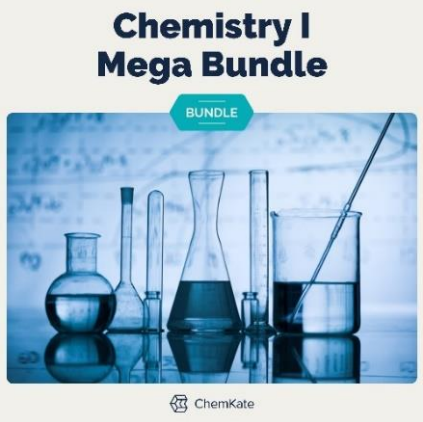
Thank you for your download! You might also be interested in the **linked** images below: ⬇️











Engage your students in this *no prep*, print and/or digital practice over Intermolecular Forces Review in this "Choose Your Own Adventure" review activity over a variety of IMFs such a hydrogen bonding, dipole-dipole interactions, dispersion forces, electronegativity and more while giving you the opportunity to provide one-on-one help to those who need it and students to self- or group- monitor their work.

✦ This is also available in the Intermolecular Forces Bundle and the Chemistry Question Trails Bundle and save *time and assurance* with all the activities such as interactive particle diagrams, labs, and *self-grading* homework found in this Chemistry I Activity Mega Bundle ✦

If you have never tried a question trail before, now is the time to try this interactive, collaborative, engaging review Digital Post or Print & Go! activity.

How to get your students trailblazin' *in the Classroom*/Hallway

1. Print out these slides and tape them around your room in order. Start on one side of your room and circle around the walls in so that it is easy for a student to locate the station they are to go to next. Printing them on colored paper is not required but will make them easier to locate. Students may work in small groups or individually to complete these.

2. Students can begin anywhere on their trail. Their answer choice will direct them to a new station. If they make a full circuit through all the questions, and end at the station where they began, they will have gotten them all correct. Students may ask you to check their work after they have visited all stations, however, if they were directed back to their first question, then they got them all correct. There is only one trail for this to happen and they will have completed them successfully. This will provide you the time to help those who need it.

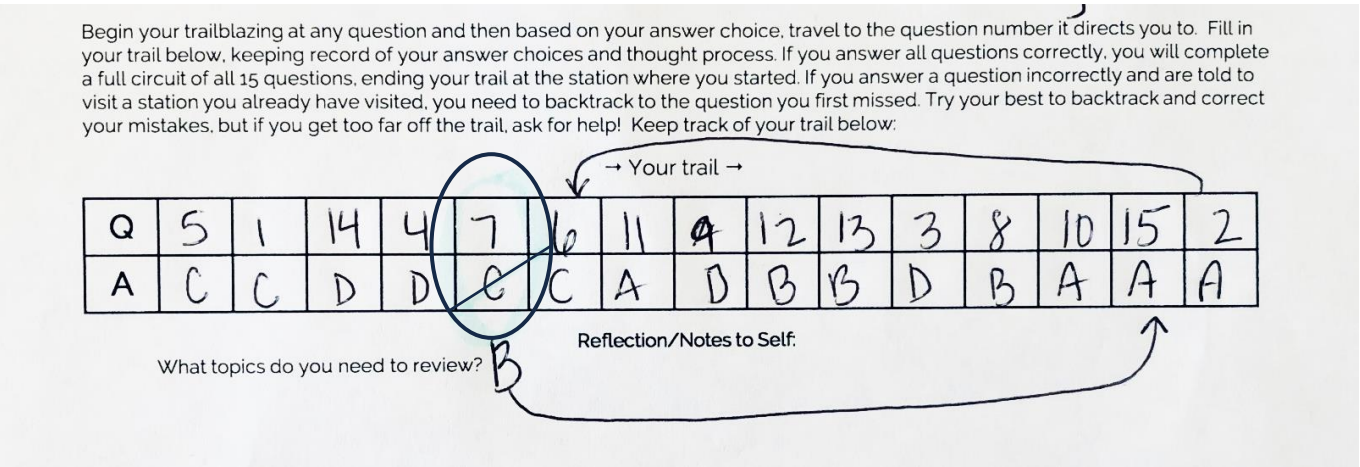
3. If students repeat any station, it means they have made a mistake. They will need to backtrack to find their mistake. If they have troubles finding their way back onto the trail, then they are directed to ask you to help get them back onto the correct trail once again.

4. As students move around the room, they keep record of their trail [question order], their answer choice, and their work/notes to self on their provided student half-sheet.

Topics covered:

- Hydrogen bonding, dipole-dipole, dipole-induced dipole, and dispersion forces
- If specific atoms can form a hydrogen bond
- Identifying correct hydrogen bonding locations
- Covalent bonding vs. hydrogen bonding
- Electronegativity
- Partial positive/negative areas of a molecule

For students who get off track – Time saving tip:
Sometimes students get off trail and can't figure out which one they missed. They will come to you to help them figure out which problem they missed, and you can send them back to make their correction. Once they correct it (or ask for further help), they will either continue on a new trail or pick up where they have already visited. To save time, *they do not need to erase their previous correct trail,* they can continue their trail in the remaining boxes. If they draw arrows, that helps identify their trail, as seen in the *generic* example below:



This student above, missed number 7, but didn't catch the mistake until she got to #15. Once corrected, this lead her back onto her trail. Students can do this with any mistake they make so that they visit all 15 problems.

Intermolecular Forces Review Question Trail – Print & Digital cont.

Accessing the Digital Activities

1. Be sure you logged into the Google account you want to save these files into first. When you select the links below, it will ask you to make a copy of the assignment. Select "Make a Copy".

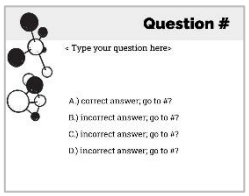
Preview	Digital Files	
	Intermolecular Forces Review Digital Question Trail	
	Intermolecular Forces Review Answer Check – for Answer Check Practice Posting this View Form link allows your students to check & correct their trail on their own. It will give them corrective feedback, but you won't have access to their submissions. I prefer to run my digital question trails formatively this way, but if you would like to see their data, see the next column.	Intermolecular Forces Review Answer Check – for Teacher Data Answers are built in and you will have access to student entries. This is currently set to allow students to view their accuracy after submitting and submit another response. The last portion encourages them to fix their own mistakes. For more help with how to edit google forms, select the Google link here.

2. These copies in your drive are now your Master Templates.

3. Printable PDF versions can be found after Terms of Use.

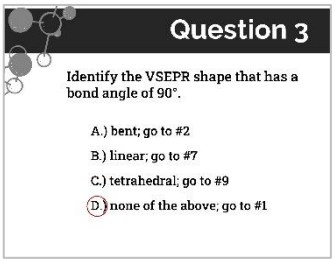
How to Edit:
When you replace a question with a new question, be sure that: (details to follow)

- the same correct answer choice is used.
- the trail number order is the same.

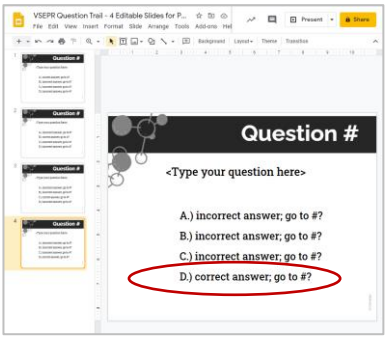
Preview	Digital Files + Description
	Intermolecular Forces Question Trail - 4 Editable Slides for Printable PDFs The link above is to a Google slide deck. If you prefer to work in PowerPoint, once copied and opened, you can download it to PowerPoint by selecting File > Download > Microsoft PowerPoint (.pptx).
	Intermolecular Forces Question Trail - 4 Editable Slides for Digital Trail

Intermolecular Forces Review Question Trail – Print & Digital cont.

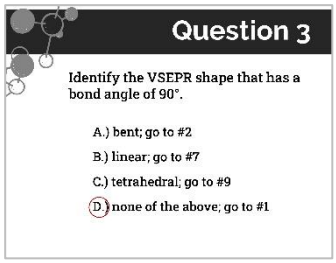
How to Edit Printable PDF Version:
For example, if you don't teach bond angles and want to replace this question:



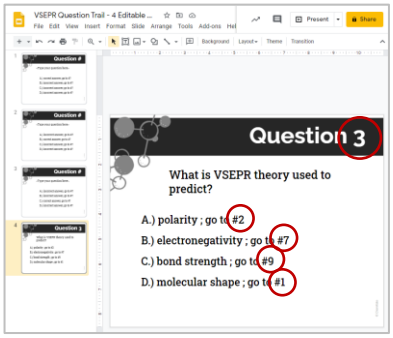
You will want to replace it with the 4th Google Slide question from the link above. The 4th Google Slide question from the slide deck has letter D as the correct answer, which matches the replaceable PDF Question #3.



Edit the Google slide deck question by replacing the question number, the question, the incorrect/correct answer choices and make the "go to #" the same choices as the replaceable Question #3. See example below:

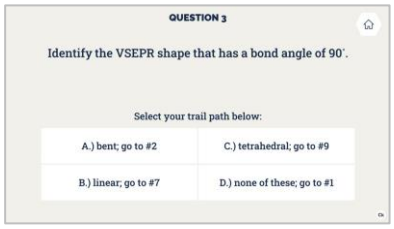


could be replaced with this question:

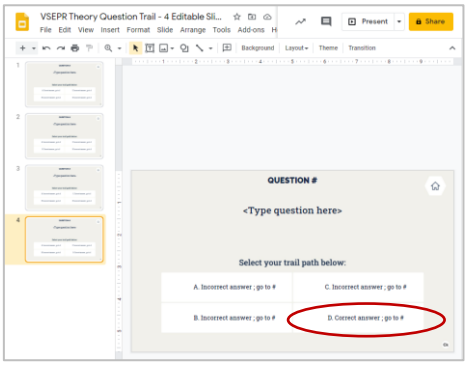


Notice that not only did I replace the question and the answer choices, keeping letter D as the correct answer, but the red circled changes use *the same "go to #" order as before*. This question can now be printed and used to replace the original bond angle PDF Question #3.

How to Edit the Digital Version:
For example, if you don't teach bond angles and want to replace this digital question:

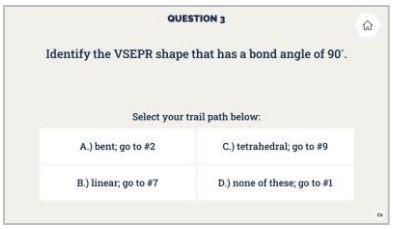


Similar to editing the PDF version, you want to replace it with the 4th question slide from the link on the previous page. The 4th question from the slide deck has letter D as your correct answer, which matches the replaceable Question #3.

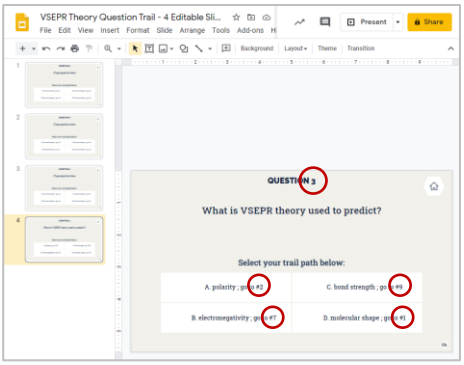


Intermolecular Forces Review Question Trail – Print & Digital cont.

Edit the slide deck question to a new question, replacing the question number, the question, the incorrect/correct answer choices and make the "go to #" the same choices as the replaceable Question #3. See example below:

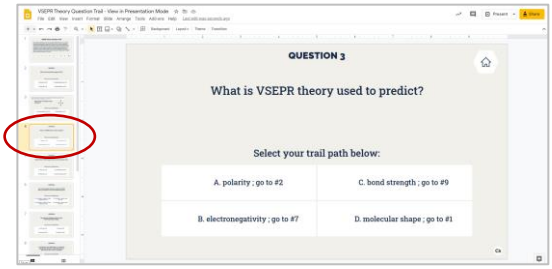


could be replaced with this question:

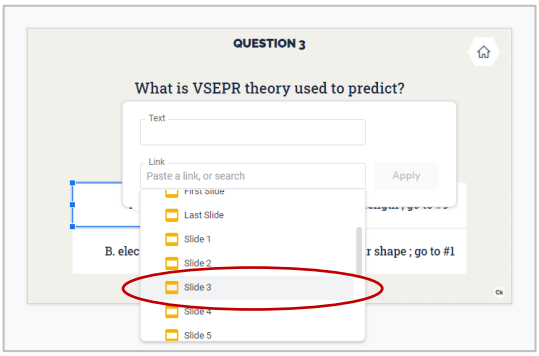


Notice that not only did I replace the question and the answer choices, keeping letter D as the correct answer, but the red circled changes use *the same "go to #" order as before* were also made.

Next, copy and paste this new slide into your digital question trail replacing the original question #3. If Google prompts you to link the two slide decks, select "do not link".

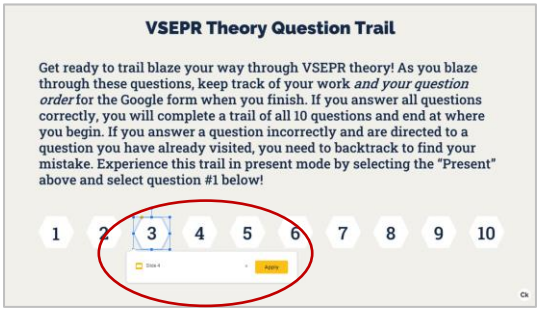


Next, you will need to hyperlink the answer choices to their corresponding slide in the trail. To do so, select an answer choice and right-click. Then select "Link". This will open a field for you to select "Slides in this presentation". After selecting this, scroll down to the slide you want it to go to. For this slide deck, because the first slide is for directions, you will want to *choose the slide that is one number higher than the "go to #"*. For example, answer choice A tells a student to "go to #2". You will want to link this answer choice to *slide #3*. Select "Apply" after the correct slide # has been chosen.



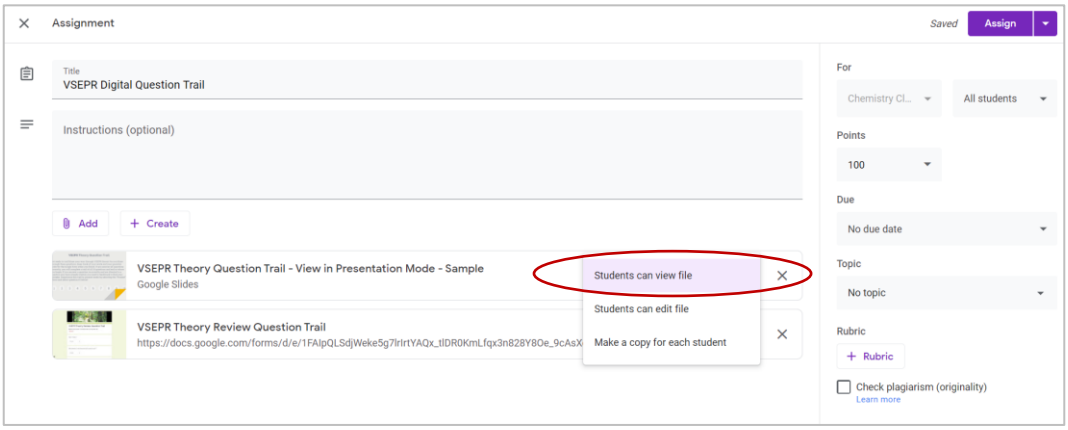
Repeat this for each of the answer choices. I would also recommend you check the slide links by presenting the slide deck and selecting your new links.

Next, you will need to relink the first slide to the new slide you just added. Select the hexagon question and right-click. Then select "Link". This will open a field for you to select "Slides in this presentation". After selecting this, scroll down to the slide you want it to go to. For this slide deck, because the first slide is for directions, you will want to *choose the slide that is one number higher than the question slide.* For example, hexagon 3 needs to link to question 3, but will need to be linked to *slide 4*. Select " Apply" after the correct slide has been chosen.



Sharing with Students on Google Classroom

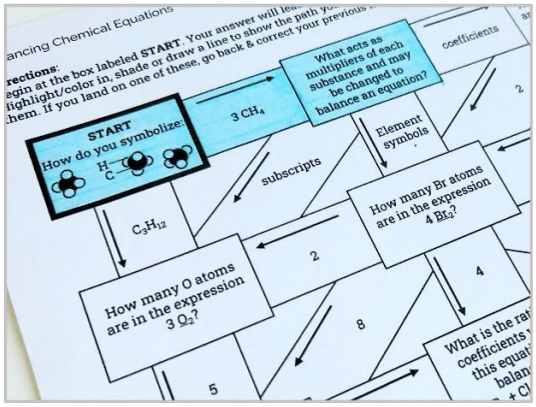
Similar to how you would have shared an unedited digital question trail, you will want to assign this to new digital slide deck to your students, except this time you would want to select "Students can *view* file" since you don't want them to have editing right to the new question.



If you need any assistance, contact me at KateCk@ChemKate.com .

Receive this Freebie!

Get this exclusive *no-prep* **balancing equation maze** - *in print and digital* formats that are *self-checking and easy to grade*, as well as receiving tips, ideas, and resources periodically sent to you.



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Thank you!

Intermolecular Forces Question Trail Name: _____ Pd:____

Begin your trailblazing at any question and then based on your answer choice, travel to the question number it directs you to. Fill in your trail below, keeping record of your answer choices and thought process. If you answer all questions correctly, you will complete a full circuit of all the questions, ending your trail at the station where you started. If you answer a question incorrectly and are told to visit a station you already have visited, you need to backtrack to the question you first missed. Try your best to backtrack and correct your mistakes, but if you get too far off the trail, ask for help! Keep track of your trail below:

Q:										
Ans:										

Workspace:
Record your station number & show your work below.

Reflection: Circle the number of how you feel after this question trail.

4	I can do it without mistakes. I can help others.	Explain.
3	I can do it by myself. I make little mistakes.	
2	Sometimes I need help and have some questions.	
1	I can't do it by myself. I don't understand yet.	

Intermolecular Forces Question Trail Name: _____ Pd:____

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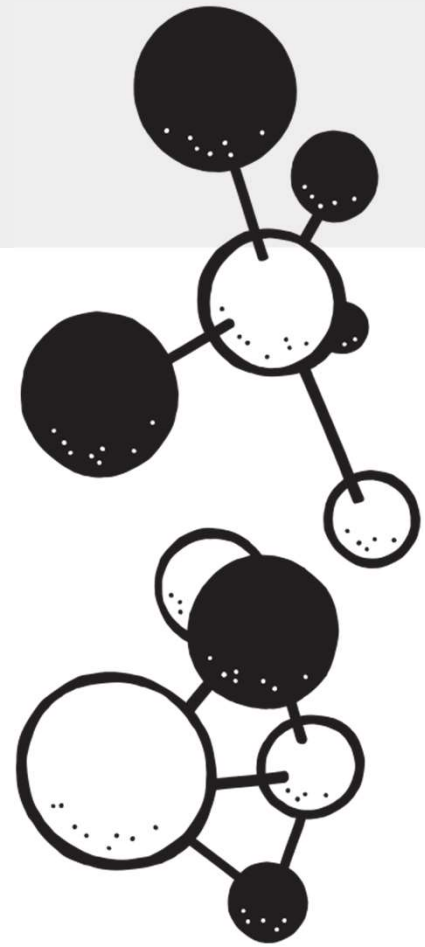
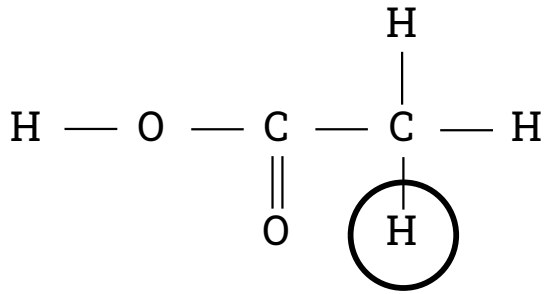


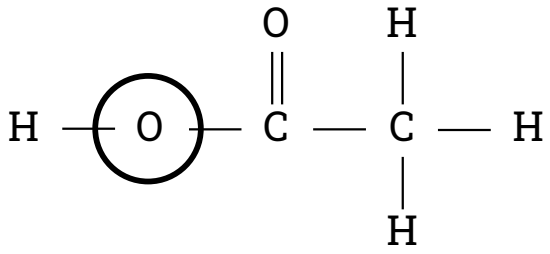
Question 1

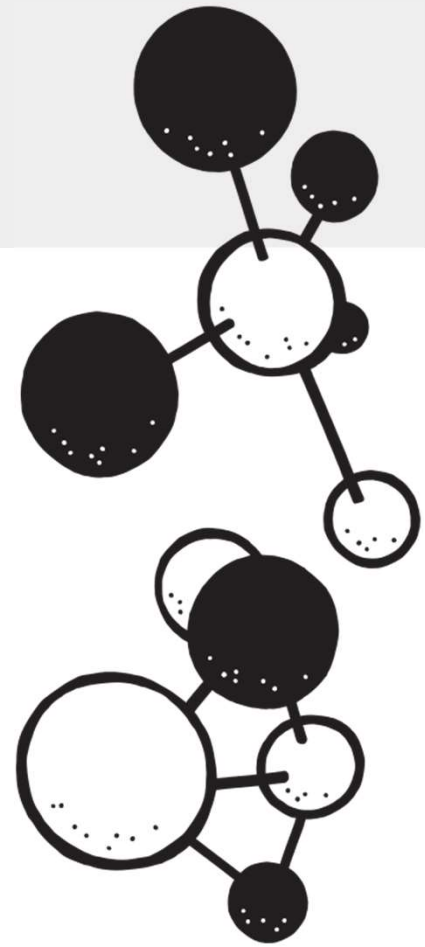
Can the two circled atoms form a hydrogen bond with one another?



A.) Yes; go to #7

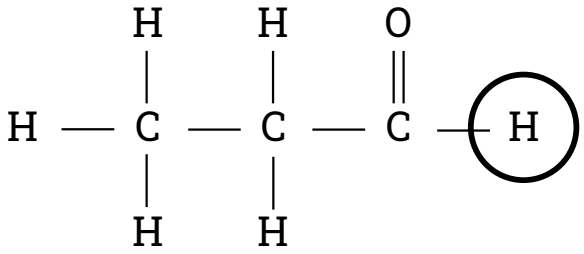
B.) No; go to #5





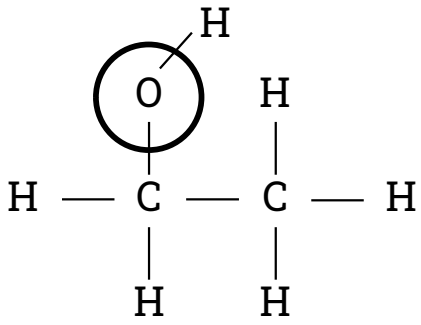
Question 2

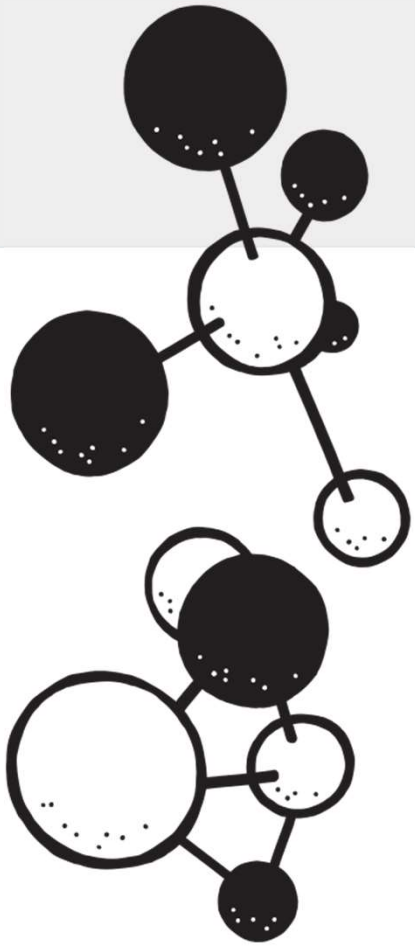
Can the two circled atoms form a hydrogen bond with one another?



A.) Yes; go to #4

B.) No; go to #8

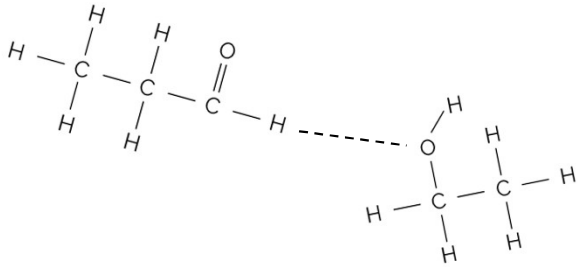




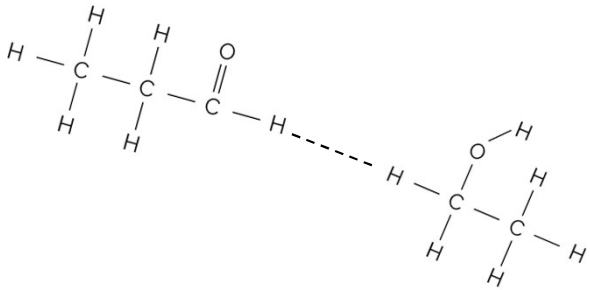
Question 3

Which picture below correctly labels the hydrogen bonding interaction between these two molecules?

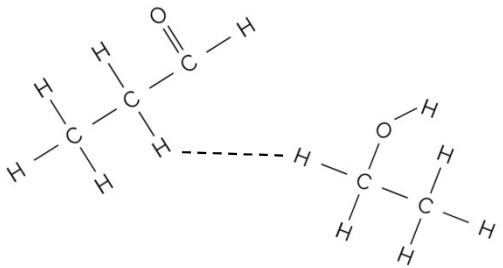
A.) Go to #1



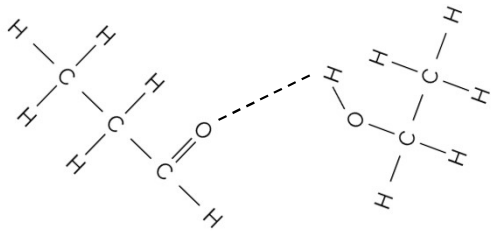
B.) Go to #10

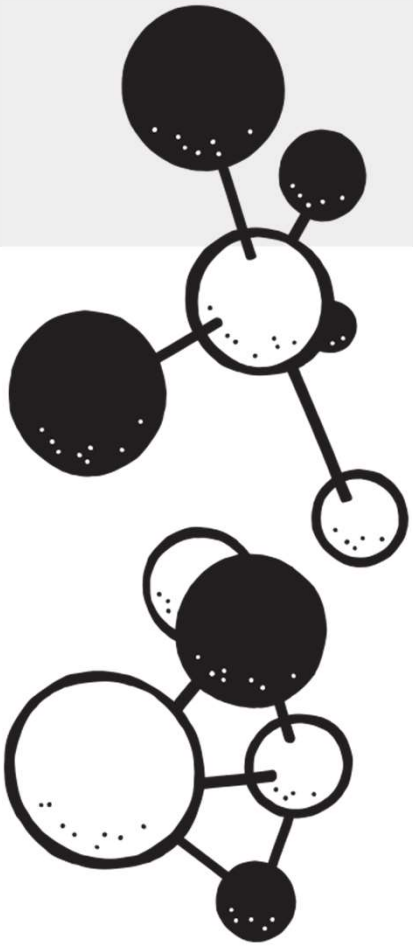


C.) Go to #6



D.) Go to #9





Question 4

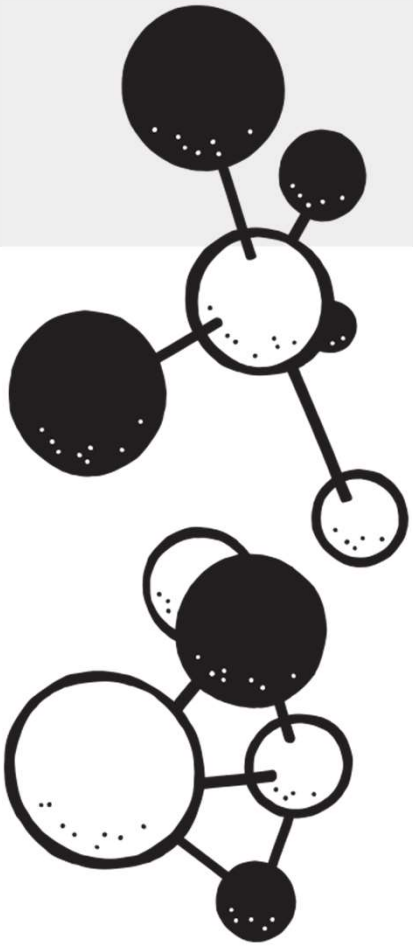
In a water molecule, which atom(s) has/have a partial negative charge?

A.) Oxygen; go to #7

B.) Hydrogens; go to #5

C.) None of the atoms; go to #2

D.) All of the atoms; go to #3

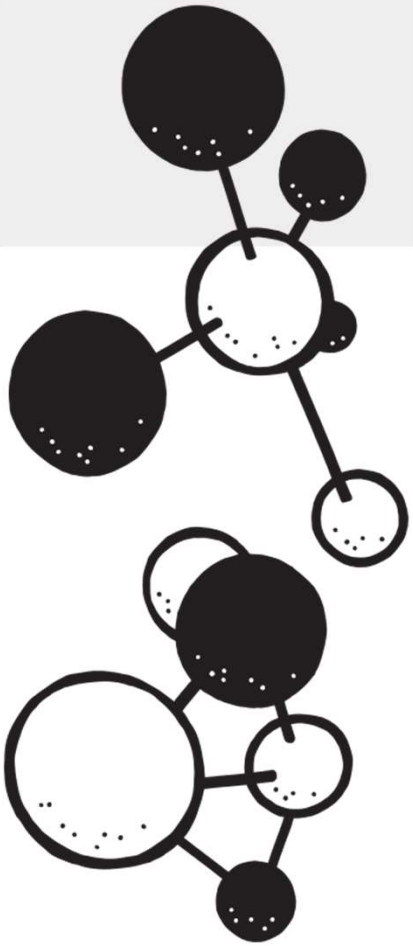


Question 5

A hydrogen bond is a type of a covalent bond.

A.) True; go to #8

B.) False; go to #4



Question 6

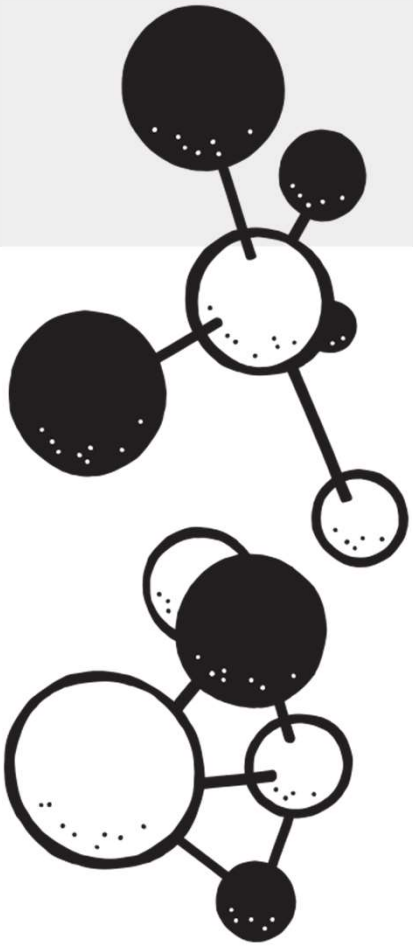
What information do we look at on the periodic table if we want to examine intermolecular forces?

A.) atomic mass; go to #1

B.) electronegativity; go to #2

C.) ionization; go to #3

D.) atomic number; go to #9



Question 7

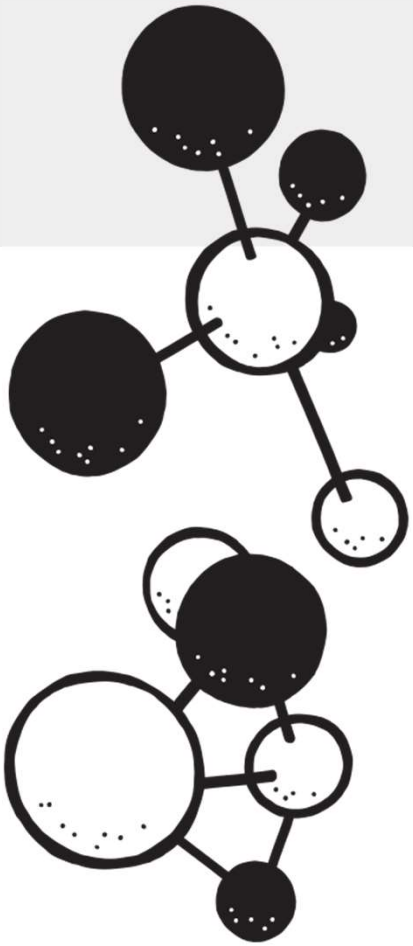
Which response includes only those molecules that can exhibit hydrogen bonding? CH_4, AsH_3, CH_3NH_2, H_2Te, HF

A.) AsH_3, CH_3-NH_2; go to #4

B.) CH_4, AsH_3, H_2Te ; go to #10

C.) AsH_3, H_2Te; go to #6

D.) HF, CH_3-NH_2; go to #3



Question 8

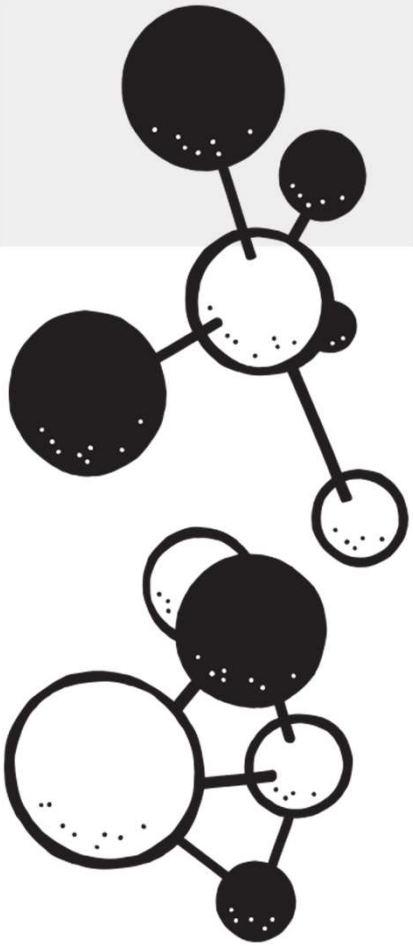
What is the dominant intermolecular force that CO_2 will have between another CO_2 in a pure sample?

A.) dispersion force; go to #1

B.) dipole-dipole interaction; go to #7

C.) dipole-induced dipole; go to #10

D.) hydrogen bonding; go to #2



Question 9

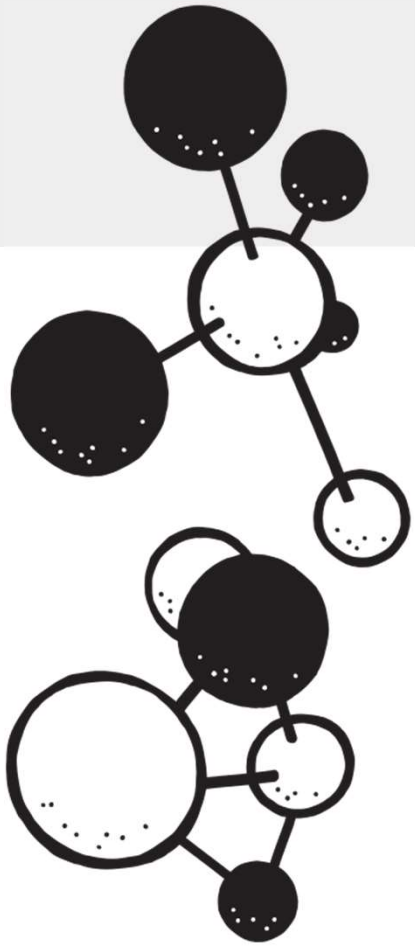
Which of the following correctly labels the intermolecular force of attraction between the two sets of molecules?

A.) CH_4 and CF_4 H bonding; go to #5

B.) O_2 and H_2O dipole-induced dipole; go to #10

C.) SiO_2 and K^+ dispersion force; go to #6

D.) NH_3 and CH_3-CH_3 H bonding; go to #8



Question 10

Rank the following in order of strongest to weakest:

covalent bond
dispersion forces
H bonding
dipole-dipole

A.) covalent bond > dipole-dipole > H bonding > dispersion; go to #9

B.) dispersion > dipole-dipole > H bonding > covalent bond; go to #4

C.) covalent bond > H bonding > dipole-dipole > dispersion; go to #6

D.) H bonding > dipole-dipole > dispersion > covalent bond; go to #3

Intermolecular Forces and the Hydrogen Bond Review Question Trail

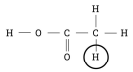
Begin anywhere

Q:	1	5	4	7	3	9	10	6	2	8
Ans:	B	B	A	D	D	B	C	B	B	A

Loops back to 1

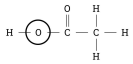
Question 1

Can the two circled atoms form a hydrogen bond with one another?



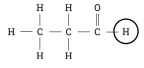
A.) Yes; go to #7

B.) No; go to #5



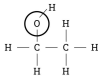
Question 2

Can the two circled atoms form a hydrogen bond with one another?



A.) Yes; go to #4

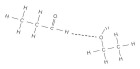
B.) No; go to #8



Question 3

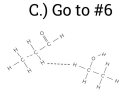
Which picture below correctly labels the hydrogen bonding interaction between these two molecules?

A.) Go to #1

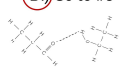


B.) Go to #10

C.) Go to #6



D.) Go to #9



Question 4

In a water molecule, which atom(s) has/have a partial negative charge?

A.) Oxygen; go to #7

B.) Hydrogens; go to #5

C.) None of the atoms; go to #2

D.) All of the atoms; go to #3

Question 5

A hydrogen bond is a type of a covalent bond.

A.) True; go to #8

B.) False; go to #4

Question 6

What information do we look at on the periodic table if we want to examine intermolecular forces?

A.) atomic mass; go to #1

B.) electronegativity; go to #2

C.) ionization; go to #3

D.) atomic number; go to #9

Question 7

Which response includes only those molecules that can exhibit hydrogen bonding? CH_4, AsH_3, CH_3-NH_2, H_2Te, HF

A.) AsH_3, CH_3-NH_2; go to #4

B.) CH_4, AsH_3, H_2Te; go to #10

C.) AsH_3, H_2Te; go to #6

D.) HF, CH_3-NH_2; go to #3

Question 8

What is the dominant intermolecular force that CO_2 will have between another CO_2 in a pure sample?

A.) dispersion force; go to #1

B.) dipole-dipole interaction; go to #7

C.) dipole-induced dipole; go to #10

D.) hydrogen bonding; go to #2

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