

Polymer Chemistry

Scene 1

MS. 2 kids sitting on a bench or table playing with slime.

“Yuck! That’s disgusting!”

CU of the slime on a boy’s hand. Oozing all over.

“Let’s scare my sister with this slime. Maybe we can spread it all over her sunglasses or something!”

MS of boy tentatively touching the slime.

“She will think that you have sneezed on her sunglasses!”

CU of both faces. Both chuckle with glee.

LS -Sister walks in on them. She has a notebook and pen in her hand. –

“Oh ! Where did you get this polymer from?”

CU of friend- *looks confused.*

“Polymer? Whats that? This is slime. Not a polymer.”

MS of sister.

“Oh you might call it slime – but it is a polymer actually.”

Over the shoulder shot of sister writing on notebook (*starts writing the word polymer on the notebook.*)

“Polymer is a long molecule”

CU of notebook.

“made up of many small molecules joined together like a chain with many links.”

(Draws small ovals and the links them with lines)

(CU of Friend):

”What is she talking about?”

CU of brother.

“Oh (sigh) she’s studying Chemistry in college this year and this semester (rolls

eyes) she is studying polymer chemistry. So I guess she knows what she's talking about."

CU of sister.

"Where did you get this slime from?"

CU of Brother.

"Duh! We bought it at a store!" (said with attitude)

MLS.

"Umph! What a waste of money! It's so easy to make this stuff at home."

Sister picks up notebook and walks out of frame.

Two shot from side. Kids just shrug their shoulders and look at each other.

Fade out

Scene 2.

Cold Grey Stone corridor with pillars. Near a corner spot. Diffuse cold lighting. School bell rings.

2 scared kids walking away from the camera. Big kid walks into frame. Kids look over their shoulders and realize too late that they have walked into a corner.

CU of Big kid -

"Eh! Give me your canteen money. I want to treat my friends today." (????? How do I make this sound more aggressive?) Smirks.

MLS - Friends of bully come and join the big kid. All smirking.

Camera positioned at level higher than kids faces. Kids are crouched in defensive position. Look around to assess situation. Then while looking continuously at bully or his friends take money box out of their bags.

Bully snatches the box. Puts his hand in and

CU of money box. pulls out money.

"Only 20 rupees? Remember to get more money tomorrow."

MS of bully.

"Otherwise!"

Throws box on floor carelessly. And kicks boys' school bag.

LS of bully and friends laughing and saying,

“Idiots! Only have twenty rupees!”

Walk out of frame.

Two shot CU of kids. Hateful vulnerable look.

Fade out

CU of Kid sitting at table thinking hard with hateful look on face.

“Oh how I just hate him!”

MS- Table has used papers strewn over it. *Angrily tears pieces off a roll of newspaper forcefully.*

“Wish we could just get him locked up in a jail!”

CU

“Huh! As though that will happen.”

Two shot -

“Don't you remember his uncle is a trustee of the school!”

Crumples wad of paper gets up and throws crumpled paper at a wall. (????? Any stronger action required???)Hand move back to table to pick up another paper.

CU of table- Under last paper that he has picked - suddenly can see a brightly coloured Polymer Chemistry book. (Silence?)

MS -Suddenly stops throwing balls and looks up at friend and says.

“Hey! Maybe we can come up with a plan.”

CU of friend-

“What do you mean?”

CU-

“Maybe we can use some of that polymer chemistry stuff to teach that bully a lesson.”

MS -

Shrug shoulders.

“You mean your sister might help us?”

Scene 3

Sister wearing a lab coat working at a lab bench with a pipette. Hears boys and looks up:

“Ah! I knew you two would come here to find (out) how to make slime. Slimy (???) boys always seem to like slime.”

Two shot Boys give knowing look to each other and then look up to sister.

“Yeah yeah! We just wanted to know more about your polymers.”

CU of face. False smile.

“It seems to be suuuuuch an interesting subject.”

MS of sister putting pipette down and taking things out of drawer and cupboards:-

“OK. OK. You don’t have to butter me so much. Here you just need some **CU** fevigluce and some boric acid to make slime.”

CU of Kids

“What is this boric acid? I think I have seen this box before.”

Frame inside frame – CU of boric acid packet MS shot of powder being sprinkled over carom board on upper left corner.

“Carom board powder. Isn’t it used to make the carom board smoother?”

CU sister: -

“Ya. That’s correct.” **(genuinely impressed)**

MS of boy looking proud VO

“Boric acid is used to make carom boards smoother. But we are going to make a solution out of it.”

CU of table.

“We are going to pour some boric acid powder into a glass of water till no more

powder dissolves any more. This is called a saturated solution.'

Show stirring of solution.

MLS-

"Now we add the glue to the solution and stir.'

CU of brother.

"What else do we need to make the slime?"

CU of sister.

"Nothing else. Here it's almost ready."

Two shot of boys.

"What?"

CU of beaker

"See! We have our selves some slime!"

CU of hands. Picks up the slime in hand and spreads it out.

MS of boys picking up the slime and feeling it.

"Wow! That was fast! Can I make some? "

Over the shoulder S.

"Sure. Here's another beaker of the boric acid solution."

Two shot-

"Here let me stir while you pour in the glue"
CU of beaker. Sound of stirring.

CU of beaker- V.O .

"Be careful- If you keep the stirring too long the your slime will not be slime any longer. Instead it will start becoming more and more solid. So keep checking for the correct point where the liquid glue turns into slime."

CU of boys-

"How does this happen?"

"Well the glue is made up of long molecules that are like short pieces of this yarn.

(show 1 foot long yarns)

When you add boric acid to it, the molecules start to link to each other. A lot like this bunch of yarn."

CU. Pull yarn bunch apart.

"If you leave the glue in the boric acid for too long then so many links form that the glue looks like a solid mess of yarn."

CU of boy.

"This stuff is slime alright."

Two shot. Both boys looking at each other with worried look.

But it doesn't look as disgusting as the slime that we bought..

CU of sister.

"Oh! You want to make that gross looking slime. That's easy too."

LS of sister .

"Let me get the Isopgul out of the medicine cabinet. You know the Pysillium husk that is used for constipation."

CU of brother.

"Isopgul!"

Looks at sister with horror then glimpses at friend. Puts head down in embarrassment and mutters.

"Didi! Do you have to let everyone know about your problems!"

LS of sister bringing the Isopgul and smiling at brother-

"Hey who has constipation! We are just going to make slime out of this pysillium husk."

CU -

"Oh!"

Sighs relief. Looks at friend again. Friend raises eyebrows and shrugs.

MS -

“Here. We will put 1 teaspoon of the husk into a beaker. Now add one glass of water to this.”

CU of beaker

“Can you see the particles of husk in the water? Now let’s stir and and heat it up for a few minutes.”

MS. Turns on burner

Fade out. 2 -3 minutes

Fade in.

CU of beaker with boiling bubbles. It’s looking more and more solid now.

MS of sister stirring

“Yup. I think it’s just about right now. Let’s take it off the burner now.”

CU of Back of spatula that is being used to stir.

“Wow that does look ready. Let me touch it.”

Over the shoulder

“Oh no! It’s very hot now. You have to wait for it to cool down before you can touch it. Let’s put some on the cold surface so that it will cool down more quickly.”

CU of surface.

“Yuck! That looks disgusting!”

Mother comes into room and looks at her watch

“Boys. Are you finished here? I will take you home in 5 minutes now.

sees the slime on surface.

Chi! Who has been sneezing over here?”

Looks at son

CU of son. VO.

“Go clean it up quickly! And didn’t I tell you to wear a sweater this morning? And get that smile off your face!” **Walks out of frame.**

Two shot of kids from side. Picking up slime and putting it back into beaker.

“Awesome! This is exactly the stuff we want.”

Give each other knowing look.

“And we have so much of it too! Thanks Didi!”

LS. Kids about to leave room. Friend starts laughing.

MS of brother-

“What happened?”

MS Friend . Points to a diaper on the bench.

“Your sister uses diapers?”

LS of sister. Looks at the both the kids. Rolls her eyes .

“UUFF! It’s not what you think. Diapers also have polymers in them. Actually it’s quite neat stuff. Want to see?”

CU

“Do we have a choice?”

MS of sister

“It will take only a minute. We first need to cut this diaper in half. Now shake the diaper. Can you see this powder falling?”

CU of surface with powder .

“Collect about 1 teaspoon of this powder.”

MS

“Now we pour this powder into a container. And add water to it. “

CU of beaker

“Watch what happens!”

Stirs stuff in beaker. Gel starts swelling.

CU of boys

“WOW! That is totally cool! What just happened here?”

CU of sister

“This is an example of a special type of polymer that can absorb lots of water. Actually this polymer can absorb water that is ?????? times its weight. Wait just watch what happens when we add more water!”

CU of beaker

“You mean just one teaspoon of that polymer could absorb so much of water?”

Hands digging into beaker and feeling the polymer.

CU of both kids looking at each other.

“Awesome! Can you imagine what would happen if this stuff was in a bucket where someone is washing their hands?”

MS of sister.

“Oh the two of you! Always thinking of pranks! Get lost now. I have work to do.”

CU of sister.

“And don’t get me into trouble with Mom. OK?”

LS.

“Yeah yeah! Don’t worry we won’t.”

Kids walk out of frame discussing things amongst each other.

Fade out.

Scene 4.

LS. Kids back in stone corridor. This time the sun is shining strongly at an angle in the corridor. There is a small bucket on a stool in the corridor. They are looking and pointing inside the bucket.

“There. We are ready.”

School bell rings.

CU of inside of bucket. Can see white powder inside it.

MS. One of them slips out of frame as though looking for someone.

I will be just back with the water!"

MS. Bully comes in with his poster in his hands. Puts his poster down in the clean pail with acetone in it.

"Do you have your money?"

Pulls on boy's shirt collar.

Boy looks around for friend. Cant find him and slowly opens bag and searches for money box.

CU of bully.

"Be quick would you! I don't have all day to wait for you."

MS Boy catches sight of friend and pulls out money box.

MS bully. Snatches money box and opens it. Without looking in box puts hand in it. And screams in fury. Pulls out hand with slime all over it.

CU bully's face.

"How dare you! You..You.. "

MS of boy. Coughing and trying best to suppress laughter while looking down.

MS of Bully. Catches sight of boys friend with water bottle in hand and lunges towards him..

"Wash my hand. Now!"

Looks around for a teacher.

"Quick! In that bucket over here."

LS of friend and bully in front of bucket. Bully's hand is in bucket. Waiting for water to be poured on it.

CU of bucket. Rubbing fingers with water that is pouring down to get rid of slime. Suddenly the white polymer starts to rise and cover his hand.

CU of Bully.

"What the"

Looks at two boys with astonished expression. and quickly picks up his Styrofoam poster and start walking away

Lots of boys have been watching the whole exchange and now start laughing and pointing at him He is astonished that these boys who are usually scared of him are now laughing at him. He runs away from the scene. What he does not notice that his poster with his picture has dissolved partially and everyone is laughing at his poster.

Int. School classroom during tiffin break

Boys are standing/sitting on their desks eating sandwiches and looking through the red chemistry book. Friends of the bully come in and ask

How did you do all that? That was quite impressive!

MS Boys

Oh! Its material that we got from our sisters polymer chemistry class. This chemistry book has loads more of fun stuff!

Really?

New friends pick up book and admire it.

Hey you kids want a treat? We will pay for it this time.

Sure! Why don't we eat some polymer.

"What?"

Yeah! Did you know that cotton candy is also a polymer?

Bully has been listening to them from a side and as they walk out he comes in and starts to peruse through the chemistry book.

