Casting and Splinting
Techniques and Care
First let's talk about scenarios where this might come into play in the school setting....
A child falls off the monkey bars and is brought to you in extreme pain. He is holding his arm protectively.

You notice his arm has a deformity at the wrist, what do you do?
To decide emergent versus urgent
- First, check pulses and neurovascular status
- Then -IMMOBILIZE

With any injury you want to stabilize it and give it external ridged support. If you have prefabricated splints, place it on with an ace wrap. If you do not, find some straight ridged piece of board to ace to the extremity. This does not mean you have to manipulate the arm if its bowed or anything like that. You should leave that up to us. This just means you are helping the child control movement at the fracture site which equals less pain for them.
I think the hardest thing is knowing what splint to choose for an injury.

• Simply put, you can never go wrong acutely with immobilizing more than you have to…
  - Meaning if it’s a finger fracture and you place the kid in a splint that goes from the finger to the elbow… FINE.
  - IF it’s a wrist fracture and you put on a long arm splint all the way to the underarm…FINE

• What is NOT fine is if you don’t immobilize enough. You will then still get movement and the patient will still hurt. i.e. If it’s a wrist injury and you put a very short splint on that only goes 1 inch below the wrist. Wrist still able to move = pain
Common splints for common injuries

Finger injury-
• just a link or finger splint if above the PIP level
IF proximal phalanx-usually needs an ulnar/radial gutter or thumb spica splint.
• Knuckle to wrist - immobilize hand high and down mid shaft of the arm at least for stability
Wrist to elbow- long arm splint usually
Toes and Foot - wooden shoe or Short leg splint

Ankle to below knee - mostly short leg splint
Around knee or above-long leg splint
Everything we have talked about so far is acute injury care..

Now let's shift to children that have already been seen in a clinic and come to you with questions or concerns…
A patient comes to school after surgery or an injury with a splint on. He complains of swelling in his fingers or foot. What would you do?
• 1st check for capillary refill
• Check finger or toe motion
• If both of these are ok then you can do a few things to help.... ELEVATE! This may take hours to see any real improvement.
• You can ICE the exposed fingers or toes. You would want to do this with a waterproof freezer bag covering the hand or foot and splint then lay the ice over the swollen fingers or toes
• You can loosen the ace over wrapping the splint and you can loosen some of the cotton at the ends of each dressing.
• I would not loosen anything else on a splint. At this point the person may need to be sent to the clinic for evaluation.
• If they have a fever of 102 or above despite any complaints they need to be seen..
What about for a cast complaint?

- With a cast you don't have any options for alteration really, just elevation and ice.

There are a few casts where these may be successful…Mostly with short arm cast and short leg cast.

The longer the cast the harder to control swelling, because more of the extremity immobilized, the more lymph flow compromised, and harder to elevate the extremity in these casts period.
So that you are more comfortable with spint alterations, we will allow all of you to apply one. This will show you what I mean by altering the ace and cotton. You never want to remove the hard plaster or fiberglass piece! Common sense will tell you that's there to keep some part of the extremity still for a reason. I would always defer this depth of altering to the treating physician’s clinic. Altering the end and the ace is almost always ok...
Ok now to discuss some cast/ splints with common issues

- Any bone that has been reduced (pushed on), the hand, toes, or fingers at the end of the splint will be much more swollen than normally.
  - ESP the wrist reductions
If cotton padding is pulled out what can you do?

- NO stuffing things down into cast!!
- You can fold a soft padding with sticky backing (i.e. bandaid) over the edges to pad that area
- You can trim or file with a nail file hard areas that poke into the skin on the edges ONLY of the cast or splint.
IF its stinky what can you do?

• You CANNOT put powders down into cast. They clump up and cause a mess and do not help the odor.
• You can use a spray deodorant to spray around the edges of the cast.
• You can use an alcohol q-tip to clean btwn the fingers (no water as it can get the cast wet and will not dry out)
“My arm is itching under the cast”

- You **cannot** put a coat hanger or other ridge structure down into a cast to scratch!
- You **can** tap on the cast
- You **can** blow cold air from a hair dryer into cast
- You **can** suggest if they are not allergic benadryl or claritin to help with the itching
- Last resort, send to the clinic...esp before trying to stick anything in cast!!
“My cast is cracked”

• If you can send them to the clinic that is great
• If they cannot come in right away, you can add duct tape to the area. That seems to work best. You can use coban to wrap around the area.
• Whatever you do, do not ignore a cast breaking down.
• IF its cracked, its moving, and if its moving, its allowing movement at the fracture site; and movement at the fracture site causes healing to be delayed or worst case causes the bone to heal at an unacceptable angle.
Water proof cast

- They can get wet and will be ok.
- Takes a little while to drain and dry completely
- Can put water down in it to help with odor and itching
- Not as comfortable bc padding is not as soft as cotton but what you lack in comfort you make up for in convenience.
That’s all Folks!

-any questions??