STEM Inclusive Program Design Checklist

Use this checklist when designing Hume Tech School programs using maker technologies, design thinking, UDL 3.0 and trauma informed practice principles. Go through the 9 domains and ensure each option has been defined, considered or enacted.

1. Intent and equity foundations

Start with purpose: identify who is being excluded and design intentionally to remove barriers to participation and success.

a. What is the equity problem this program addresses?
b. Which student cohorts are historically excluded in this space?
c. What data should be consulted before designing? (school, community, student voice)

2. Student voice and co-design

Design with students, not for them, by embedding diverse voices throughout planning, delivery and evaluation.

a. Have diverse students been included in co-design?
b. Are CALD, First Nations, disabled, LGBTQIA+, women, and disengaged learners represented in planning?
c. Have we compensated or formally recognised student input?
d. How will feedback loops be built in and enabled?

3. Cultural safety and representation

Ensure every learner can see themselves reflected, respected and valued in the content, people and stories presented.

a. Does content reflect diverse scientists, engineers and innovators?
b. Are First Nations perspectives meaningfully embedded (not tokenistic)?
c. Are examples culturally responsive and globally inclusive?
d. Are we avoiding deficit framing?

4. Accessibility and UDL 3.0 alignment

Create flexible learning experiences that provide multiple ways for students to engage, learn and demonstrate their understanding.

a. Do learners have a choice in topics or contexts?
b. Is there a clear purpose connected to real-world impact?
c. Flexible groupings and roles?
d. Multimodal content? (visual, written, audio, hands-on?)
e. Plain language options?
f. Vocabulary scaffolds for EAL learners?
g. CC videos and transcripts?
h. Can students show learning in multiple formats?

5. Neurodivergent and disability-inclusive design

Design environments, routines and activities that reduce barriers and support a wide range of learning and participation needs.

a. Sensory considerations? (noise, lighting, smell, materials?)
b. Clear learning routines and predictable structure?
c. Explicit instructions and chunking?
d. Processing time built in?
e. Alternative participation modes?
f. Physical accessibility of tools and spaces?

6. Socioeconomic inclusion

Remove financial, social and informational barriers so opportunities are genuinely accessible to all students.

a. No hidden costs for families?
b. Are materials accessible outside school hours?
c. Pathways information provided clearly?
d. Industry exposure not limited to students with networks?

7. Psychological and identity safety

Foster a culture where every student feels safe, respected, included and confident to contribute.

a. Are clear norms for respectful collaboration visible and communicated to participants?
b. Explicit stance against racism, sexism, homophobia, ableism
c. Visible allyship signals in building?
d. Staff trained in inclusive language

8. Industry and community partnerships

Build authentic partnerships that broaden opportunities, share power and create meaningful benefits for students and communities.

a. Industry partners reflect student diversity?
b. Mentors are briefed on inclusive engagement
c. Power dynamics acknowledged
d. Do partnerships benefit community, not just branding opportunity?

9. STRESS test Questions

Pressure-test the experience through the eyes of those most likely to feel excluded, uncertain or overlooked.

1. If the most anxious student walked in, would they feel capable?
2. If the quietest student contributed, would their idea be valued?
3. If a family unfamiliar with STEM read the program outline, would it feel welcoming?