

## Identifying and Utilizing Cultural Capital Approach to Implement Culturally Responsive Strategies

Pedagogies in multicultural education have changed in “stance, terminology, and practice” over the years from culturally relevant [1], to culturally responsive [2], to culturally sustaining [3]. In our work, we subscribe to “responsiveness” as it captures the processes that leverage students’ cultural capital.

Integral to culturally responsive strategies for student engagement is the integration of the cultural capital students bring to a learning environment. This document has been drafted to (1) more immediately focus NASA EPDC’s asset-based evaluation of Next Generation Science (NGS) products and (2) eventually offer a *Culturally Responsive Strategies Legend* that highlights a cultural capital approach. The legend serves as a tool to (a) categorically highlight evidence of culturally responsive strategies for student engagement already present throughout the curriculum or product, and (b) identify inherent opportunities to infuse students’ cultural capital and community wealth [5][6] in ways that further enhance an activity. Essentially, the use of a culturally responsive strategies legend helps educators more readily identify culturally responsive teaching practices and additional learning opportunities [7].

Sangam et al. (2022) propose six major strategies that leverages the cultural capital of students to implement culturally responsive student engagement and use their corresponding symbols (see Table 1) and descriptors (see Table 2) to guide asset-based evaluation of culturally responsive curriculum and instruction.

**Table 1.** Culturally Responsive Strategies Legend

#	Cultural Capital Approach	Symbol	Sample ICON
1	Making Cultural Connections	MCC	
2	Language and Communications	LC	
3	High Expectations	HE	
4	Power and Participation	PP	
5	Student Identity and Funds of Knowledge	SIFK	
6	Critical Knowledge and Social Justice	CKSJ	

**Table 2.** Cultural Capital Descriptors

#	Cultural Capital Approach	Description
1	Making Cultural Connections (MCC)	Reflect on one's own culture and leverage students' cultural background to make connections to the curriculum and instruction. [8][9][10]
2	Language and Communications (LC)	

		Communicate in linguistically and culturally responsive ways using multiple modes and multiple perspectives. [11]
3	High Expectations (HE)	Set high standards for students with flexible grading, extra credit, etc., and opportunities for engaging different preferred learning styles. [12][13]
4	Power and Participation (PP)	Elicit, value, and respect students' unique contributions, and explicitly support a sense of belonging and inclusion among all — not just those who actively put forth their ideas. [14]
5	Student Identity and Funds of Knowledge (SIFK)	Teach to and through the strengths of students' self-concept and cultural capital as a dynamic resource; create and maintain collective understanding by making connections to personal/community/cultural knowledge and role models from the community. [15][16][17]
6	Critical Knowledge and Social Justice (CKSJ)	Connect learning to current real-world issues/contexts in the community by collaborating with family and community and empower them to change/transform issues to make a positive impact. [18][19]

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*For example, “Ask” (a step w/in the engineering design process) and “Engage” (a step within the 5e model process) are existing tasks for some of the activities, which inherently foster opportunities to tap into the social assets, or cultural capital, of the students. At any point in the text where these steps are included, the symbol “MCC” or an icon can be inserted to show that this is an opportunity to **make cultural connections**, which suggests the educators “Reflect on one’s own culture and leverage students’ cultural background to make connections to the curriculum and instruction”*

**Example - NGS Product: Landing Humans on the Moon Activity 1 (Work in Progress)**

| EG Page | Existing Evidence                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Enhancement Opportunity                                                                              |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| p. 9    | <ul style="list-style-type: none"> <li>• Pose Question </li> <li>• “Create a graphic ...”  </li> <li>• Teamwork </li> </ul> | <ul style="list-style-type: none"> <li>• Include multicultural perspectives on Moon (MCC)</li> </ul> |
| p.11    | <ul style="list-style-type: none"> <li>• “Optional ...” </li> <li>• “Present Findings”, Extensions and Differentiations </li> </ul>                                                                                                                                                               |                                                                                                      |
| p. 12   | <ul style="list-style-type: none"> <li>• Career Corner   </li> </ul>                                                                                                                                           |                                                                                                      |

## References

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